	UNITED STATES DISTRICT COU E EASTERN DISTRICT OF TEX SHERMAN DIVISION	AS UU JUN - 1 AM 9: 30
ALCATEL USA, INC.	)	TEXAS-EASTERN BY SUM SCOTT
Plaintiff,	)	Coy
v.	) Civil Action N	No. <u>4.00019</u> 9
CISCO SYSTEMS, INC.	)	
Defendant.	)	

## **COMPLAINT**

)

Plaintiff Alcatel USA, Inc., by and through the undersigned attorneys, hereby files this Complaint requesting damages, injunctive relief, and declaratory relief, upon personal knowledge as to its own acts and circumstances, and upon information and belief as to the acts and circumstances of others, as follows:

# THE PARTIES

- 1. Alcatel USA, Inc. is a Delaware corporation authorized to do business in the State of Texas with its principal place of business at 1000 Coit Road, Plano, Collin County, Texas, 75075. Alcatel USA, Inc. and its subsidiaries ("Alcatel") are engaged in the engineering, manufacture, and sale of numerous products and services for use in the domestic and international telecommunications industry.
- 2. Defendant Cisco Systems, Inc. ("Cisco") is a California corporation with its principal place of business at 170 West Tasman Drive, San Jose, California 95134. Cisco is a competitor of Alcatel, also engaged in the engineering, manufacture, and sale of products and services for the telecommunications industry.

- 3. This lawsuit arises out of business done and acts of patent and copyright infringement and torts committed by Cisco and a company it recently acquired, Monterey Networks, Inc. ("Monterey"), a corporation that was incorporated under the laws of the state of Delaware with its principal offices at 2280 Campbell Creek Blvd., Richardson, Dallas County, Texas 75081.
- 4. In August 1999, Cisco agreed to acquire all outstanding shares, options, and warrants of Monterey that Cisco did not already own. Cisco completed its acquisition of Monterey in September 1999, at which time Monterey was merged into Cisco, and Monterey ceased to exist as a legal entity. Cisco is now the operating entity of what previously was Monterey, and it has continued doing the same business and committing the same wrongs committed by Monterey. As the surviving corporation to the merger, Cisco is the successor of Monterey and has thus assumed all liabilities for the wrongs committed by Monterey out of which this lawsuit arises. References hereafter to the acts of Cisco include references to the acts of its predecessor Monterey.

# JURISDICTION AND VENUE

- 5. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 271, et seq., for copyright infringement arising under the Copyright Act of 1976, 17 U.S.C. §§ 101, et. seq., and for misappropriation, misappropriation of trade secrets, theft of trade secrets under the Texas Theft Liability Act, Texas Civil Practice and Remedies Code § 134.001, et. seq., tortious interference with contractual relations, and constructive trust under Texas common law.
- 6. This Court has subject matter jurisdiction over Counts One and Two of this action pursuant to 28 U.S.C. §§ 1331 and 1338.
- 7. This Court has subject matter jurisdiction over Counts Three through Seven of this action pursuant to 28 U.S.C. § 1338, and by its supplemental jurisdiction under 28 U.S.C. § 1367.

This Court also has subject matter jurisdiction over Counts Three through Seven of this action pursuant to 28 U.S.C. § 1332 because this civil action is between citizens of different states. The amount in controversy exceeds \$75,000.00, exclusive of interest and costs.

8. Cisco is doing business in the State of Texas and maintains an office in this district at 18581 North Dallas Parkway, Suite 100, Dallas, Collin County, Texas 75787. This Court therefore has personal jurisdiction over the Defendant and venue is proper under 28 U.S.C. §§ 1391(b), (c), and 1400. Cisco may be served with process in this action by serving its registered agent for service of process, CT Corporation System, 811 Dallas Avenue, Houston, Texas 77002.

## INTRODUCTION

- 9. Alcatel brings this action to redress the infringement of Alcatel's patent rights and copyrights, as well as Cisco's systematic misappropriation of confidential, proprietary and trade secret technical information regarding cutting edge Alcatel technology.
- 10. Alcatel is the owner of all right, title, and interest in and to U.S. Patent No. 5,455,959 entitled "System For Collecting From Masters Information Independently Collected From Associated Slaves in Shelves of a Telecommunications Terminal" ("the '959 Patent"). A copy of the '959 Patent is attached hereto as Exhibit A. Alcatel markets and sells its own products which are covered by the claims of the '959 Patent, including optical cross-connects, such as Alcatel's 1680 Optical Gateway Cross-Connect.
- 11. Cisco has willfully infringed the '959 Patent by making, using, offering to sell, or selling within the United States an optical cross-connect product. The product was known as the "20000 Series Wavelength Router" before Cisco acquired Monterey, and was then renamed "Cisco ONS 15900 Series Wavelength Router" (the "Wavelength Router"). Cisco is continuing to willfully

infringe the '959 Patent by making, using, offering to sell, or selling the Wavelength Router in the United States.

- 12. In addition to owning the '959 Patent, Alcatel is the owner of all right, title, and interest in and to the copyrights in the computer programs "Whip" and "WhipSource," both of which are software tools used to develop and maintain software source code, as well as certain "make" files, which are an automated method for translating human readable source code into a finished working program. Whip, WhipSource and the "make" files contain a substantial amount of material wholly original with Alcatel and are copyrightable subject matter under the laws of the United States.
- 13. Alcatel has complied in all respects with the Copyright Act of 1976, 17 U.S.C. § 101 et seq., and all other laws governing copyright, and has obtained Certificates of Registration for Whip, Whip Source, and its "make" files. True and correct copies of these registration certificates and supplements thereto are attached hereto as Exhibit B.
- 14. Cisco has knowingly and willfully infringed Alcatel's copyrights in Whip, WhipSource, and certain of Alcatel's "make" files by copying them and using them to prepare programs for the Wavelength Router that are substantially similar to or derived from Whip, WhipSource, and certain of Alcatel's "make" files.
- 15. Alcatel also possesses valuable trade secrets that are related to its Whip, WhipSource and "make" file programs. By copying Alcatel's Whip and WhipSource programs, and using them to write programs to develop and maintain software for the Wavelength Router, and by copying certain of Alcatel's "make" files and using those Alcatel "make" files to develop its own "make" files, Cisco has also misappropriated Alcatel trade secrets. By misappropriating the trade secrets related to these programs, Cisco has avoided spending the time and incurring the substantial research

and development costs that Alcatel incurred developing and improving Whip, WhipSource, and the "make" files.

- 16. Alcatel also owns other valuable trade secrets and confidential and proprietary information concerning its own optical cross-connect products and technology, including its 1680 Optical Gateway Cross-Connect and its 1680 Optical Layer Cross-Connect. Alcatel also owns valuable trade secrets and confidential and proprietary information concerning other telecommunications products and technology which have been incorporated in its optical cross-connect products.
- 17. As explained more fully below, before Cisco acquired Monterey, Monterey systematically raided Alcatel of more than thirty of its key personnel. Those former Alcatel personnel brought to Cisco Alcatel trade secrets useful in developing optical cross-connect products, and Cisco has employed those trade secrets in the development and marketing of the Wavelength Router. This has enabled Cisco to develop the Wavelength Router in a fraction of the time it would have taken without the benefit of Alcatel's trade secrets.

#### FACT BACKGROUND

# A. Alcatel's Products and Technology

18. Alcatel is a leading designer, developer, and marketer of highly sophisticated telecommunications equipment and services. Among other products and services, Alcatel designs, develops and markets cross-connects, including optical cross-connects. Alcatel also designs and develops other products, not themselves cross-connects, that use technology that has been included in existing cross-connects and may be included in future Alcatel cross-connects. Each year, Alcatel invests substantial financial and personnel resources in research and development for its optical cross-connect technology, and in developing strategic plans for its current and future products.

- 19. A "cross-connect" is a system that connects signals in multiple telecommunication input lines to multiple telecommunication output lines. Cross-connects are used to route or switch signals from input lines to output lines in an optimal manner that makes efficient use of a telecommunications transmission network. Cross-connects are also used to reroute signals through the telecommunications network in the event of a network failure. An "optical cross connect" is a cross-connect that works with input and output optical signals on fiber-optic cables.
- 20. In 1995, Alcatel began developing its 1680 Optical Gateway Cross-Connect ("OGX") product. OGX is a cross-connect system that is used to manage information carried on fiber optic telecommunications networks. Alcatel completed the first release of OGX in 1999.
- 21. OGX is comprised of computer software and telecommunications hardware that performs the actual routing or switching of signals. OGX uses two broadly-defined types of computer software: administrative software, which among other things controls, monitors, and determines how to make connections between input and output signals in the network; and operational software, which actually carries out the connections determined by the administrative software.
- 22. The administrative software, also sometimes called Level One software, is the most complex and critical component of OGX. This software functions in essence as the brain of the OGX by making routing decisions executed by the OGX hardware and operational software. Alcatel's administrative software includes, among other things, an interface between the crossconnect and the telecommunications network in which the cross-connect is deployed, an element management system, and hardware interfaces. Among the functions the administrative software performs are keeping an inventory of the hardware that is present in the cross-connect, tracking the status of that hardware, and locating faults within the cross-connect software and hardware.

- 23. Alcatel invested substantial financial and personnel resources in research and development of its OGX cross-connect product, and specifically in developing its own proprietary administrative software. One important feature of the OGX administrative software is that it was made specifically to be usable in subsequent generations of cross-connect products without substantial modification. The administrative software alone is the result of a research and development investment by Alcatel costing well in excess of \$10,000,000.
- 24. In 1998, in response to increased demand for telecommunications network usage, Alcatel began developing its next generation optical cross-connect product, the 1680 Optical Layer Cross-Connect ("OLX"). OLX is designed to manage telecommunications information running at faster speeds more efficiently and cost-effectively than OGX. Although OLX does not use all of the same hardware that OGX uses, OLX does use substantially the same administrative software that OGX uses.
- 25. Alcatel markets OGX and will be marketing OLX to long distance telephone carriers with large telecommunications networks, such as AT&T and MCI. Alcatel has received substantial orders for OGX from AT&T, MCI, Level 3, Bell Canada, and SBC Telecommunications.
- 26. Alcatel is also engaged in research and development with regard to other cross-connects, as well as other products, including its Lightwave products, which involve proprietary technology that has been used in cross-connects and could be used in future cross-connects. For example, it is contemplated that the OLX will use network restoration technology taken from Alcatel's Lightwave products.

# B. Monterey's Formation and Target Product

27. Monterey was founded in July 1997 to develop an optical cross-connect product—the Wavelength Router. Like Alcatel's OGX and OLX, the Wavelength Router is an optical

cross-connect which connects multiple input lines to multiple output lines. The Wavelength Router comes with two other items: the Cisco Wavelength Router Manager, which is an element management system that was known as Monterey's ReyView Element Management System before Cisco acquired Monterey; and the Cisco Optical Network Planner, which is a network modeling and simulation tool that was known as Monterey's ReyMaster before the acquisition. References hereafter to the "Wavelength Router" include the Cisco Wavelength Router Manager and the Cisco Optical Network Planner.

28. The Wavelength Router directly competes with Alcatel's 1680 OLX cross-connect product. Indeed, both Monterey (before it was acquired by Cisco) and Alcatel submitted proposals and made offers to sell their respective optical cross-connect products in response to a request for proposals made by AT&T for such products.

# C. Cisco's Infringement of Alcatel's '959 Patent and Copyrights and Its Misappropriation of Alcatel's Trade Secrets

- 29. Before it was acquired by Cisco, Monterey, originally based in California, relocated to Richardson, Texas in order to take advantage of its large number of telecommunications companies from which Monterey could hire experienced engineers. Monterey's President and CEO, Joe Bass the former Vice President and General Manager of Optical Networks for Alcatel explained to the Dallas Morning News, "They drove in on Central and, lo and behold, they saw Nortel and Alcatel and Ericsson in Richardson and said, 'This is the place to be if we're going to be a start-up telecom company."
- 30. After Monterey relocated to Richardson, it hired numerous personnel from Alcatel's Optical Networks group as well as several senior Alcatel managers. Monterey systematically targeted key Alcatel personnel who have intimate knowledge of those Alcatel trade secrets that Monterey wished to use in its product. Monterey's raiding of Alcatel resulted in more than thirty

key defections of Alcatel personnel who had knowledge of highly confidential, proprietary and trade secret technical information regarding Alcatel's products. Indeed, by the Summer of 1999 approximately fifty percent of all Monterey software engineers were former Alcatel personnel. The Alcatel personnel Monterey has recruited who have knowledge of Alcatel's proprietary technology that Monterey has used include application specific integrated circuit designers, software architects, software programmers, and technical marketing specialists, including key designers of the administrative software for Alcatel's optical cross-connect products. Descriptions of personnel Monterey has raided and the Alcatel trade secrets that Monterey and Cisco have misappropriated follow, and are provided only as examples of the personnel Monterey has raided and the trade secrets Monterey and Cisco have misappropriated.

- 31. Marian Trnkus ("Trnkus") was the chief architect and lead designer of the administrative software for the OGX cross-connect. Trnkus was employed by Alcatel (originally through its predecessor in interest, Rockwell International) from April 1989 through May 1993. From January 5, 1994, until he joined Monterey in July 1998, Trnkus worked for Alcatel in substance as an employee and in form as a contractor. At all times during his work for Alcatel, Trnkus was subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary or trade secret information of Alcatel to any third party at any time.
- 32. In 1995, Alcatel assigned Trnkus to develop a new architecture for the administrative software for a cross-connect. The administrative software architecture that Trnkus, working with other Alcatel personnel, developed for Alcatel was used in a cross-connect that ultimately became known as the OGX.
- 33. Alcatel's OGX administrative software architecture is valuable and not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco.

- 34. Alcatel's OGX administrative software architecture also provides Alcatel with a competitive advantage over those who do not know or use it. Through the expenditure of substantial time and resources, Alcatel was able to determine that certain software architectural design decisions worked well together to produce a successful product. Knowing that a particular combination of software design decisions have been proven to work together is extremely valuable.
- 35. Over the course of his work for Alcatel, Trnkus also was intimately involved in designing the administrative software used in Alcatel's optical cross-connects, as well as the applications and the features to be incorporated into these products. Trnkus is also familiar with approaches to various aspects of this software that Alcatel through the expenditure of funds and manpower determined are not workable. In addition, Trnkus possesses proprietary information concerning product features which Alcatel elected not to incorporate or to delay incorporating into these products and the various technical or market reasons behind such decisions. Trnkus also did substantial work on implementing the interface between a cross-connect and the user's network management system and has knowledge of Alcatel's proprietary knowledge in this area as well.
- 36. As part of carrying out his assignment to develop the primary architecture of what became Alcatel's proprietary OGX administrative software, Trnkus developed software programs known internally at Alcatel as "Whip" and "WhipSource." Whip and WhipSource were software tools designed to solve specific problems in developing and implementing cross-connect software architecture.
- 37. In addition to owning copyrights in Whip and WhipSource, Alcatel also possesses trade secrets related to Whip and WhipSource. The concepts underlying the use of the Whip and WhipSource tools to develop and maintain its administrative software and, separately, the source code written to implement those concepts, were both accomplished through investments by Alcatel,

are not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco, and are Alcatel trade secrets.

- 38. Both the Whip and WhipSource concept and implementation provide Alcatel with a competitive advantage over those who do not know or use them. Alcatel invested a year testing the Whip and WhipSource concept and implementation with prototypes of the administrative software architecture, and spent several months evaluating alternatives, only to conclude that the alternatives were inferior. The Whip and WhipSource concept and implementation became integral to the successful development and maintenance of the software code for Alcatel's OGX administrative software. The Whip and WhipSource concept and implementation are also being used to develop Alcatel's OLX administrative software. Among other advantages, the Whip and WhipSource concept and implementation enable Alcatel to develop software code faster with fewer errors and to better maintain and more easily modify already-developed software code, which constitutes the vast majority of any programming effort. The Whip and WhipSource concept and implementation facilitate the writing of software that has fewer levels of subclasses and thus performs better and faster than software that has more subclasses, takes up more space, and thus performs more slowly.
- 39. While at Alcatel, Trnkus also wrote software source code for the OGX project. Among other software code, Trnkus wrote certain "make" files for the OGX software. "Make" files are an automated method for translating the human readable source code of the OGX software into a finished working program. They are called "make" files because they work with publicly available software called "Make."
- 40. In addition to owning copyrights in its "make" files, Alcatel also possesses trade secrets related to its "make" files. Alcatel's "make" files are valuable and not generally known to,

nor readily ascertainable through proper means by, third parties such as Cisco. Alcatel's "make" files, along with its OGX source code, Whip, and WhipSource, were stored in Alcatel's password-protected network.

- 41. Alcatel's "make" files also provide Alcatel with a competitive advantage over those who do not know or use them. It would take an estimated four to six weeks to design, code, and test such programs.
- 42. Cisco specifically hired Trnkus to work on the development of a software architecture for the Wavelength Router and to select software tools for its development. Soon after Trnkus's arrival at Cisco, Cisco began to infringe Alcatel copyrights and misappropriate Alcatel trade secrets.
- 43. Initially, the Wavelength Router software architecture was developed by Cisco employees without the benefit of any input from Trnkus. After Trnkus began working on the software architecture, however, he used Alcatel's OGX administrative software architecture in developing the Wavelength Router software architecture and incorporated the principal design features of that architecture into the design of the architecture of the Wavelength Router. Cisco thereby misappropriated Alcatel trade secrets concerning its software architecture.
- 44. Among the functions a cross-connect must perform are the functions of collecting an inventory of the hardware that is present in the cross-connect and collecting information regarding the functioning of the hardware. Included among the features of Alcatel's proprietary, confidential, and trade secret administrative software architecture misappropriated by Cisco is Alcatel's implementation and use of polling to collect such information. Alcatel's implementation of the polling function in its OGX administrative software architecture is used in the Wavelength Router.
- 45. Alcatel's '959 Patent discloses an invention relating to communications systems and, more particularly, to collecting inventory information and status information in a

telecommunications terminal, such as a cross-connect. Alcatel's OGX administrative software uses this invention as disclosed in the '959 Patent. The Wavelength Router infringes the '959 Patent by using that same invention as claimed in the '959 Patent.

- 46. Cisco, through the actions of Trnkus, also has infringed Alcatel copyrights in, and misappropriated Alcatel trade secrets concerning, Whip, WhipSource, and certain of Alcatel's "make" file programs. Soon after arriving at Cisco, Trnkus copied Alcatel's Whip program, made minor changes, and called the resulting copy "Genpat." He also copied Alcatel's WhipSource program for Cisco, made minor changes, and called the resulting copy "Deppat." Finally, Trnkus copied Alcatel's copyrighted "make" files. Cisco subsequently used Genpat and Deppat to develop and maintain software source code for the Wavelength Router and used the copied "make" files to develop "make" files for its own Wavelength Router software.
- 47. During his tenure at Alcatel, Trnkus also oversaw the two separate design teams writing Alcatel's OGX administrative software the Facility Team and the Equipment Team. Trnkus, and other former Alcatel personnel, thus had knowledge of the specific Alcatel employees who were most knowledgeable about various aspects of the design and architecture of Alcatel's core administrative software for its optical cross-connects, as well as of other Alcatel technologies useful in cross-connects, which information also is confidential, proprietary and a trade secret of Alcatel. Trnkus, and other former Alcatel personnel, used this confidential, proprietary, and trade secret information to assist Cisco, along with other former Alcatel personnel, in further raiding Alcatel personnel.
- 48. In October 1999, after Alcatel made known to Cisco its claims of trade secret misappropriation, Cisco discharged Trnkus. Cisco, however, did not then stop its unauthorized use of Alcatel's computer programs and other trade secrets and proprietary technology.

# D. Cisco's Raiding of the Remainder of Alcatel's Administrative Software Design Team

- 49. In addition to Trnkus, Cisco also hired away from Alcatel Ronald Russell ("Russell"), Soudabeh Beheshti ("Beheshti"), Joseph Calaza ("Calaza"), Andra Humes ("Humes"), Yun Lu ("Lu"), and John Borders ("Borders"), the design team leaders and key team members responsible for the design of Alcatel's core software for its optical cross-connect products. Cisco targeted these engineers because of their particular expertise in and knowledge of Alcatel's proprietary, confidential and trade secret information in its software to thereby gain a competitive advantage for Cisco's optical cross-connect product.
- 50. Russell was also one of Alcatel's lead designers of the core administrative software for Alcatel's 1680 OGX cross-connect. Russell was employed by Alcatel (originally through its predecessor in interest, Rockwell International) from June 1989 through August 1998, when he resigned his employment to work for Cisco.
- 51. Beheshti was a key member of the Facility Team working on the administrative software. Beheshti was employed by Alcatel from November 7, 1994 through March 11, 1999, when she resigned her employment to work for Cisco.
- 52. Calaza resigned from Alcatel on August 20, 1999, to join Cisco. While at Alcatel, Calaza was a leader of the Equipment Team working on the administrative software. His responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.
- 53. Humes resigned from Alcatel on August 20, 1999, to join Cisco. While at Alcatel, Humes was a leader of the Facility Team working on the administrative software used in both the OGX and OLX products.

- 54. Lu resigned from Alcatel on August 26, 1999, to join Cisco. While at Alcatel, Lu was an expert member of the Facility Team working on the administrative software. Lu's responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.
- 55. Borders resigned from Alcatel on August 26, 1999, to join Cisco. While at Alcatel, Borders was a leader of the Facility Team. Borders's responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.
- 56. Allan Collins ("Collins") was employed by Alcatel until August 24, 1999, when he resigned to join Cisco. While at Alcatel, Collins was a software architect for platform applications who also worked on OGX.
- 57. At all times during the course of their employment with Alcatel, Russell, Beheshti, Borders, Calaza, Collins, Humes, and Lu were each subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary or trade secret information of Alcatel to any third party at any time.
- Russell, Beheshti, Borders, Calaza, Collins, Humes, and Lu each possess confidential, trade secret and highly proprietary information concerning the technical development, architecture and functionality of Alcatel's optical cross-connect products, specifically including the 1680 OGX and 1680 OLX, and the software used to operate them. Over the course of their employment with Alcatel, they were intimately involved in designing the administrative software used in Alcatel's optical cross-connects, as well as the applications and the features to be incorporated into these products. They are also familiar with approaches to various aspects of this software that Alcatel through the expenditure of funds and manpower has determined are not workable. In addition, they possess proprietary information concerning product features which Alcatel elected not to incorporate

or to delay incorporating into these products and the various technical or market reasons behind such decisions.

- the communications between the cross-connect and the user's network management system. The "user" is the network operator who buys the cross-connect. Each user's network management system requires the receipt of an enormous amount of data from the cross-connect concerning its performance, the traffic it is carrying, and any problems that may be developing. The user's network management system also relays messages and commands to the cross-connect. This communication between the cross-connect and the user's network management system is referred to as "the user interface." The user interface can differ from network to network, and in particular AT&T has requirements for the user interface that differ from those of all other major network operators in the United States. Alcatel has devoted substantial resources to research and development concerning the user interface and possesses important trade secret and proprietary information concerning it, and in particular concerning how to implement the user interface in conformance with AT&T's requirements. Alcatel's OGX operates successfully in AT&T's network and successfully interfaces with AT&T's network management system.
- 60. Russell, Beheshti, Borders, Calaza, Collins, Humes and Lu, as well as Trnkus, also possess Alcatel trade secret information concerning implementation of the interface between a cross-connect and a user's network management system.
- 61. Former Alcatel personnel have disclosed Alcatel's proprietary, confidential, and trade secret information regarding Alcatel's administrative software, and in particular its user interface, to Cisco, and that information has been used in designing the administrative software and the user

interface for the Wavelength Router. Cisco has thereby further misappropriated Alcatel trade secrets.

# E. Cisco's Raiding of Alcatel ASIC Engineers

- 62. Cisco also hired Alcatel engineers who worked on and possessed confidential, proprietary, trade secret information concerning application specific integrated circuit ("ASIC") designs used in Alcatel's Lightwave and cross-connect products.
- 63. Former Alcatel personnel targeted and employed by Cisco in the ASIC area include Robert Hall (formerly a team leader of ASIC development in Alcatel's Lightwave Division), Lane Quibodeaux (also formerly a team leader of ASIC development in Alcatel's Lightwave Division), and Brian Allen (a member of the ASIC development team for Alcatel's Lightwave Division). Hall was employed by Alcatel until April 3, 1998, when he resigned to work for Cisco. Quibodeaux was employed by Alcatel until July 17, 1998, when he resigned to go to work for Cisco. Allen was employed by Alcatel until August 13, 1998, when he resigned to go to work for Cisco. At all times during their employment with Alcatel, Hall, Quibodeaux, and Allen were subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary, or trade secret information of Alcatel to any third party at any time.
- 64. Hall, Quibodeaux, and Allen each possess confidential, trade secret, and highly proprietary information concerning Alcatel's ASIC design and development for its Lightwave products which would be useful in the development and design of ASICs in the Wavelength Router. Over the course of their employment with Alcatel, Hall, Quibodeaux, and Allen were intimately involved in design and development of ASICs used in Alcatel's Lightwave products. Hall, Quibodeaux, and Allen are familiar with approaches to various aspects of Alcatel's ASIC design and development that Alcatel through the expenditure of funds and manpower has determined are not workable.

- 65. Cisco targeted Hall, Quibodeaux, and Allen because of their particular expertise in and knowledge of Alcatel's proprietary, confidential and trade secret information regarding Alcatel's ASIC designs and development to thereby gain a competitive advantage for Cisco's optical cross-connect product. Indeed, Cisco also directly solicited other Alcatel ASIC engineers and invited them to discuss ASIC employment opportunities, but was unable to lure them away.
- 66. Former Alcatel personnel have disclosed information regarding Alcatel's proprietary, confidential, and trade secret ASIC designs to Cisco, and that information has been used in designing ASICs for the Wavelength Router.

# F. Cisco's Raiding of Alcatel Technical Marketing Personnel

- 67. Cisco hired Alcatel's technical marketing employees who possessed confidential, proprietary, and trade secret information. Former Alcatel technical marketing personnel hired by Cisco include John Adler (who formerly worked in Optical Networks Marketing at Alcatel), Parrish Autry (who formerly worked in Alcatel's AT&T Program Office), and Greg Nehib and James Anthony (both of whom formerly worked in sales for Alcatel, focusing on Alcatel's relationship with AT&T). Adler was employed by Alcatel until April 3, 1998, Autry until February 25, 1999, Nehib until May 14, 1999, and Anthony until August 20, 1999, when each resigned his position at Alcatel to go to work for Cisco. At all times during their employment with Alcatel, Adler, Autry, Nehib, and Anthony were subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary, or trade secret information of Alcatel to any third party at any time during or after their employment with Alcatel.
- 68. By virtue of their positions at Alcatel, Adler, Autry, Nehib, and Anthony possess confidential trade secret information concerning Alcatel's bidding strategies, marketing plans, pricing plans, and development schedules for Alcatel's optical cross-connect product lines, and how

Alcatel prioritized its responses to various performance issues in marketing and delivering its optical cross-connect products to customers, including specifically AT&T. Autry and Nehib both worked extensively on Alcatel's marketing and sale of OGX to AT&T. Before he left Alcatel for Cisco, Anthony worked on preparing Alcatel's response to the very same AT&T request for proposal for which Alcatel proposed the OLX and Cisco proposed the Wavelength Router.

69. Former Alcatel personnel have disclosed confidential, trade secret information concerning Alcatel's bidding strategies, marketing plans, pricing plans, and development schedules for Alcatel's optical cross-connect product lines, and how Alcatel prioritized its responses to various performance issues in marketing and delivering its optical cross-connect products to customers, including specifically AT&T, to Cisco and Cisco has used that information in connection with the marketing of the Wavelength Router.

# G. Alcatel's Protection of its Intellectual Property.

- The Alcatel trade secrets and confidential information at issue herein are subject to stringent security measures and controls including the designation of private or proprietary documents by appropriate labeling and markings, control of access to Alcatel facilities by badges worn by authorized personnel and restriction of access to such facilities by non-Alcatel personnel. Additionally, these trade secrets and confidential information are circulated within Alcatel only on a need-to-know basis and subject to agreements requiring recipients of such materials to preserve their confidentiality. Alcatel also requires employees to sign confidentiality policy statements, conducts periodic audits of confidentiality procedures, reminds employees during exit interviews of their ongoing confidentiality obligations, and limits computer network access.
- 71. Each of the Alcatel personnel identified above was subject to an obligation to Alcatel to preserve the confidentiality of Alcatel, confidential and trade secret information entrusted to them

during their employment at Alcatel. This obligation expressly survives the termination of their employment with Alcatel and forbids them from using or disclosing any such confidential or trade secret information, whether intentionally or unknowingly, directly or indirectly.

# STATE COURT PROCEEDING

- 72. On August 31, 1999, Alcatel filed a Verified Petition and Application for Injunctive Relief in the District Court of Dallas County, Texas (44th Judicial District) alleging *inter alia* misappropriation and inevitable disclosure of trade secrets arising out of Cisco's raiding of Alcatel employees, captioned *Alcatel USA, Inc. v. Monterey Networks, Inc.*, Cause No. 99-06912 (Dallas County, 44<sup>th</sup> Dist.) ("State Court Action").
- 73. A Temporary Injunction Hearing was conducted in the State Court Action on October 19, 1999, and December 13, 14, 15, and 16, 1999. On March 27, 2000, The Honorable Judge Margaret Keliher issued a Temporary Injunction Order in the State Court Action enjoining Cisco from using certain software programs it misappropriated from Alcatel. A copy of the Temporary Injunction Order entered in the State Court Action is attached hereto as Exhibit C.
- 74. Because Alcatel's claims for infringement of the '959 Patent and copyright infringement are exclusively within the jurisdiction of federal courts and cannot be brought in the State Court Action, and because the unfair competition claims asserted in the State Court Action are substantially related to, and intertwined with Alcatel's claims for infringement of the '959 Patent and copyright infringement, Alcatel seeks to bring all of its claims in this Court, including the unfair competition claims brought in the State Court Action.

# **COUNTS**

# **COUNT ONE**

# (Infringement of U.S. Patent No. 5,455,959)

- 75. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 74 above as if fully set forth herein.
- 76. Cisco has directly infringed and is directly infringing the '959 Patent by making, using, offering to sell, or selling within the United States, the Wavelength Router.
- 77. As a result of the unlawful patent infringement, Alcatel has been damaged in an amount that cannot presently be determined.
- 78. Cisco's unlawful patent infringement has caused Alcatel immediate and irreparable injury, and unless Cisco is enjoined, will continue to cause Alcatel such injury for which there is no adequate remedy at law.
- 79. The acts of infringement herein have been made with full knowledge of Alcatel's rights in the '959 patent. Such acts constitute willful and deliberate infringement, entitling Alcatel to enhanced damages and reasonable attorneys fees.
- 80. Cisco intends to continue its unlawful infringing activity unless enjoined from doing so.

# **COUNT TWO**

# (Copyright Infringement)

- 81. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 80 above as if fully set forth herein.
- 82. Cisco has infringed and will continue to infringe Alcatel's copyrights in Whip, WhipSource, and certain of its "make" file programs by reproducing them and using them to create programs for use in developing, maintaining, and building software for the Wavelength Router which are substantially similar to or derived from Whip, WhipSource, and certain of Alcatel's "make" files.
- 83. As a result of the unlawful copyright infringement, Alcatel has been damaged in an amount that cannot be presently determined.
- 84. Cisco's unlawful copyright infringement has caused Alcatel immediate and irreparable injury, and unless Cisco is enjoined, will continue to cause Alcatel such injury for which there is no adequate remedy at law.
- 85. Cisco intends to continue its unlawful copyright infringement unless enjoined from doing so.

# **COUNT THREE**

# (Common Law Misappropriation)

- 86. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 85 above as if fully set forth herein.
- 87. Alcatel's research and development of information, confidential trade secret information and other properties taken by and being used by Cisco were created by Alcatel through the substantial expenditure of labor, skill and money and possess a unique pecuniary interest for

Alcatel. Specifically, Alcatel has spent millions of dollars and thousands of staff hours to design and develop information taken and being used by Cisco, which, now is using such information to obtain a special advantage in competition with Alcatel because Cisco is burdened with little or none of the expense that Alcatel incurred to develop this information.

88. Alcatel has been injured as a proximate result of Cisco's misappropriation because its comparative advantage in the marketplace specifically with respect to Cisco has been substantially eroded. Additionally, Alcatel has been injured as a proximate result of Cisco's misappropriation because Alcatel has received no compensation for its use of Alcatel's trade secrets and other proprietary information. Cisco has acted maliciously and intentionally, without privilege to do so, in committing these acts of misappropriation.

## **COUNT FOUR**

# (Misappropriation of Trade Secrets)

- 89. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 88 above as if fully set forth herein.
- 90. The former Alcatel employees hired by Cisco were in possession of significant and valuable Alcatel trade secrets. These trade secrets have been misappropriated by and continue to be used by Cisco.
- 91. The Alcatel trade secrets in the possession of its former employees are economically valuable and not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco. Cisco obtained economic value from the disclosure and use of Alcatel trade secrets because such trade secrets have allowed Cisco to develop certain products and technology that it would not have otherwise been able to develop at all or, alternatively, that would have required substantial additional expenditures of time, labor and money by Cisco to develop. Additionally,

Cisco obtained economic value from the disclosure and use of Alcatel's trade secrets because Cisco was able to circumvent research and development hours and expenditures.

- 92. Cisco has misappropriated Alcatel's trade secrets by acquiring those secrets when it knew that the trade secrets were acquired by improper means or by the violation of confidential relationships between Alcatel, on the one hand, and one or more of Alcatel's former employees, on the other hand.
- 93. Cisco's acts of trade secret misappropriation were willful, malicious, and in conscious disregard of the rights of Alcatel. As a result, Alcatel is entitled to preliminary and permanent injunctions to protect against further use, disclosure and transfer of these trade secrets. To the extent such trade secrets have already been used, disclosed or transferred, Alcatel is further entitled to its actual damages, punitive damages, permanent injunctive relief, attorneys' fees, interest and costs.

# **COUNT FIVE**

# (Texas Theft Liability Act)

- 94. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 93 above as if fully set forth herein.
- 95. By knowingly stealing Alcatel trade secrets, Cisco has also committed acts of theft of Alcatel trade secrets that give rise to liability under the Texas Theft Liability Act, Texas Civil Practice Remedies Code § 134.001, et. seq.

# **COUNT SIX**

# (Tortious Interference with Existing Contracts)

- 96. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 95 above as if fully set forth herein.
- Office of the property of the

#### **COUNT SEVEN**

## (Constructive Trust)

- 98. Alcatel incorporates by reference the allegations of paragraphs 1 through 97 above as if fully set forth herein.
- 99. The unlawful actions described above have, on information and belief, allowed Cisco to obtain title, possession, or other apparent right to property that Cisco, in equity and good conscience, should not be allowed to hold and enjoy.
- 100. A constructive trust should therefore be imposed on all of the property that Cisco has wrongfully obtained as a result of the unlawful conduct described above. Cisco would be unjustly enriched if allowed to retain such money and property and, in equity, should therefore be compelled to provide it to Alcatel.

# PRAYER FOR RELIEF

WHEREFORE, Alcatel prays that the Court award relief as follows:

- (1) On the First Count,
  - (a) declaring that Cisco has infringed one or more claims of United States Patent No. 5,455,959;
  - (b) declaring that Cisco has willfully infringed one or more claims of United States Patent No. 5,455,959;
  - (c) preliminarily and permanently enjoining and restraining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from directly or indirectly infringing any one or more claims of United States Patent No. 5,455,959;
  - (d) awarding treble the amount of losses and damages because of the willful, knowing and wanton nature of Cisco's patent infringement; and
  - (e) declaring that this is an exceptional case within the meaning of 35 U.S.C. § 285 entitling Alcatel U.S.A., Inc. to an award of reasonable attorneys' fees, expenses, and costs in this action.
- (2) On the Second Count,
  - (a) declaring that Cisco has infringed Alcatel's copyrights in the Whip, WhipSource, and certain of its "make" file programs;
  - (b) preliminarily and permanently enjoining and restraining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from directly or indirectly infringing Alcatel's copyrights in Whip, WhipSource, and certain of its "make" files;

- (c) entering judgment for Alcatel and against Cisco for damages based upon Cisco's acts of infringement, pursuant to the Copyright Act of 1976, 17 U.S.C. §§ 101 et seq.; and
- (d) requiring Cisco to account for all gains, profits, and advantages derived from its acts of infringement and for its other violations of law, and awarding to Alcatel any profits attributable to Cisco's infringements of Alcatel's copyrights;
- (3) On the Third and Fourth Counts, preliminarily and permanently enjoining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from using, transferring, or otherwise disclosing Alcatel's trade secrets, proprietary information, products and property.
- (4) On all Counts,
  - (a) awarding actual and compensatory damages in an amount to be determined at trial;
  - (b) awarding costs of suit incurred herein;
  - (c) awarding punitive damages in an amount to be determined at trial; and
  - (d) awarding pre- and post-judgment interest as provided by law.
- (5) Requiring Cisco to file with the Court and to serve on Alcatel, within 30 days after service of the Court's order as herein prayed, a report in writing under oath setting forth in detail the manner and form in which Cisco has complied with the Court's order; and
- (6) Awarding such other and further relief in law or in equity to which Alcatel may be justly entitled.

### **JURY DEMAND**

Plaintiff Alcatel requests a trial by jury of all claims so triable.

Dated: June 1, 2000

## Of Counsel:

Ronald S. Rauchberg Kenneth Rubenstein Mark E. Davidson John C. Stellabotte Proskauer Rose LLP 1585 Broadway New York, NY 10036-8299 (212) 969-3000 - Telephone (212) 969-2900 - Telecopy

Stuart J. Sinder Kenyon & Kenyon One Broadway New York, New York 10004 (212) 425-7200

John J. Kendrick, Jr. State Bar No. 11278000 4680 Trammel Crow Center 2001 Ross Avenue Dallas, Texas 75201 (214) 871-2105 - Telephone (214) 871-3342 - Telecopy

Attorneys for Alcatel USA, Inc.

Respectfully submitted,

SIEBMAN, REMNOLDS & BURG, LLP

By:

Clyde M. Siebman State Bar No. 18341600

Brian H. Burg

State Bar No. 03374500

421 North Crockett

Sherman, Texas 75090

(903) 870-0070 - Telephone

(903) 870-0066 - Telecopy

# United States Parnt [19]

Simmering

[11] Patent Nu

5,455,959

[45] **Date of Patent:**  Oct. 3, 1995

[54]	SYSTEM FOR COLLECTING FROM MASTERS INFORMATION INDEPENDENTLY COLLECTED FROM ASSOCIATED SLAVES OF A
	TELECOMMUNICATIONS TERMINAL

[75] Inventor: Marlin V. Simmering, Wendell, N.C.

[73] Assignee: Alcatel Network Systems, Inc., Richardson, Tex.

[21] Appl. No.: 293,093

[22] Filed: Aug. 19, 1994

# Related U.S. Application Data

[63]	Continuation of Ser. No. 8	44,134, Mar. 2, 1992, abandoned
[51]	Int. Cl.6	G06F 13/38; G06F 13/22
		H04L 12/403
[52]	U.S. CL	395/800
<b>[58]</b>	Field of Search	
		275; 370/85.5, 85.8; 364/132
		25.06, 825.07, 825.08, 825.21

#### [56] References Cited

#### U.S. PATENT DOCUMENTS

4,494,111	1/1985	Rocci et al 340/533
4,568,909	2/1986	Whynacht .
4,578,773	3/1986	Desai et al
4,635,195	1/1987	Jeppesen, III et al 395/750
4,712,213	12/1987	Warwick et al 371/15
4,726,017	2/1988	Krum et al 370/85
4,890,279	12/1989	Lubarsky 370/58.1
4,905,182	2/1990	Fitch et al
4,924,461	5/1990	Amemiya et al 370/95.2
4,942,550	7/1990	Миттау 395/275
		*

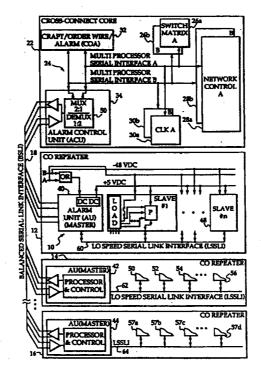
4,992,976	2/1991	Yonekura et al 395/500
5,038,140	8/1991	Ikeuchi 340/825.02
5,038,317	8/1991	Callan et al 395/325
5,065,314	11/1991	Maskovyak 395/325
5,161,151	11/1992	Kimura et al 370/13
5,166,675	11/1992	Amemiya et al 340/825.08
5,237,676	8/1993	Arimilli et al 395/550
5,261,115	11/1993	Saunders et al 395/800
5,301,346	4/1994	Notavianni et al 395/800

Primary Examiner-Krisna Lim Attorney, Agent, or Firm-Ware, Fressola, Van Der Sluys & Adolphson

#### **ABSTRACT** [57]

An automatic inventory retrieval system collects inventory and status information regarding the presence or absence of plug-in master and slave units in the slots of various shelves in a telecommunications terminal, such as a network element, by having independent masters in each shelf polling associated slaves at a relatively frequent polling rate and collecting information for storage until reception of a relatively infrequent master polling signal provided from a network control unit to all of the shelves. Communication between the control and the various shelves is provided over a balanced serial link interface comprising differential pairs, whereas communications internal to the shelves and the network control may be by means of single-ended signals. Redundancy in the network element is accommodated with a single serial link between the central control and the shelves by use of time-division multiplexing. The relatively frequent slave address polling in the shelves may be done on the order of every several hundred milliseconds or less, whereas the relatively infrequent polling of the master units in the shelves by the central control occurs at a frequency on the order of once every second or more.

2 Claims, 5 Drawing Sheets

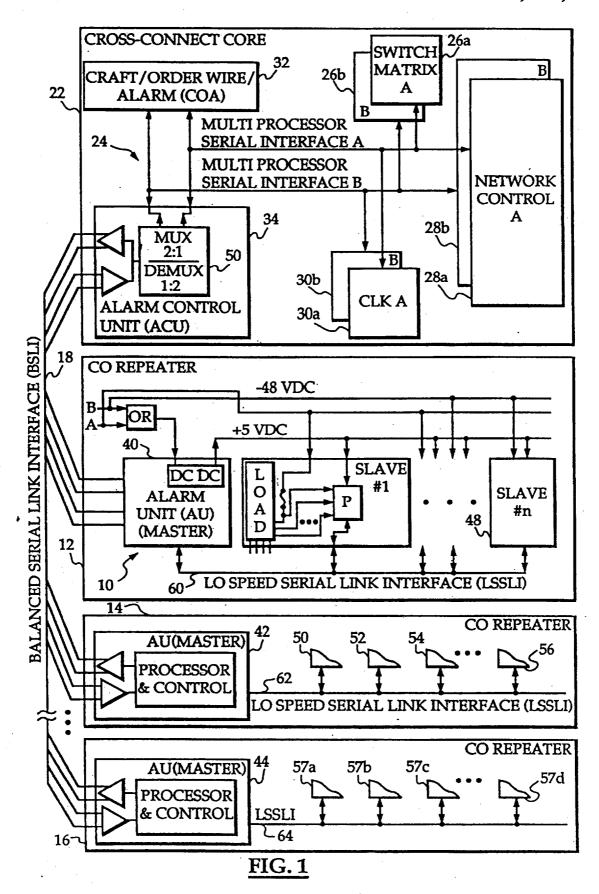


U.S. Patent

Oct. 3, 1995

Sheet 1 of 5

5,455,959



U.S. Patent

Oct. 3, 1995

Sheet 2 of 5

5,455,959

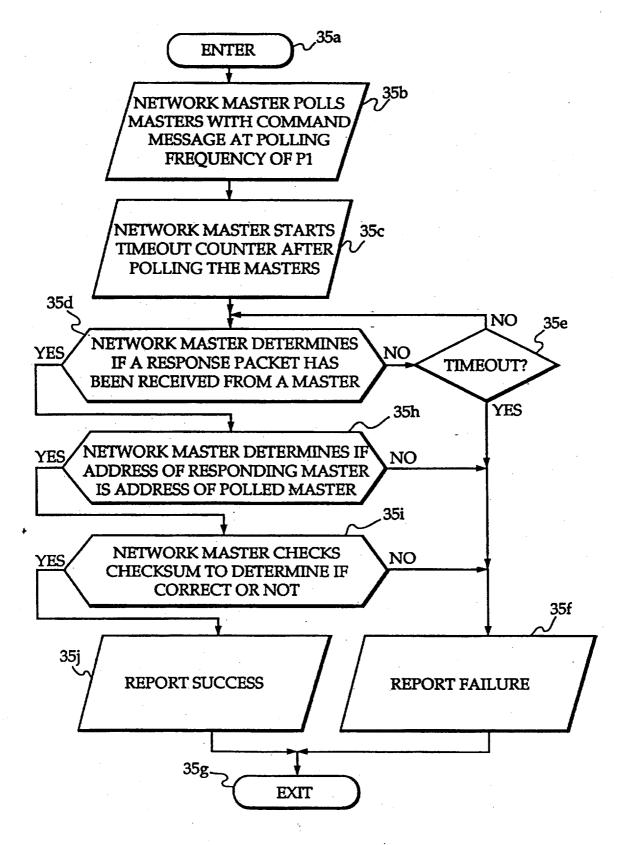


FIG. 2

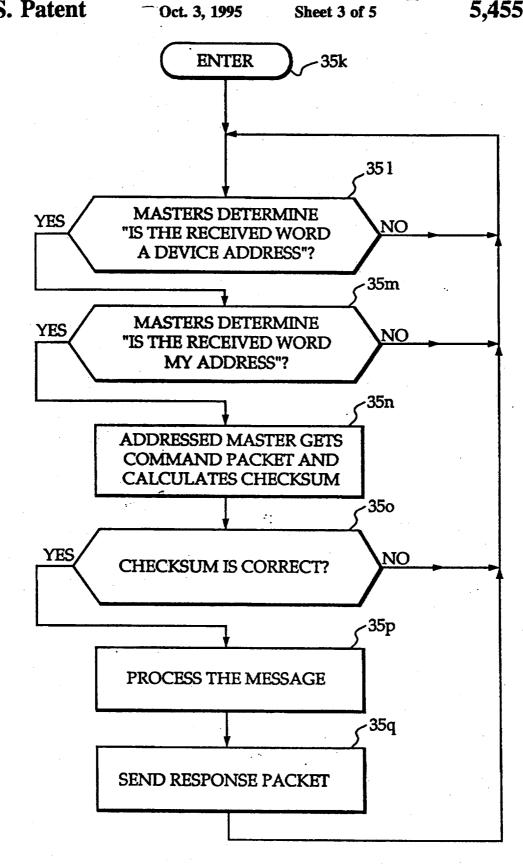


FIG. 3

U.S. Patent

Oct. 3, 1995

Sheet 4 of 5

5,455,959

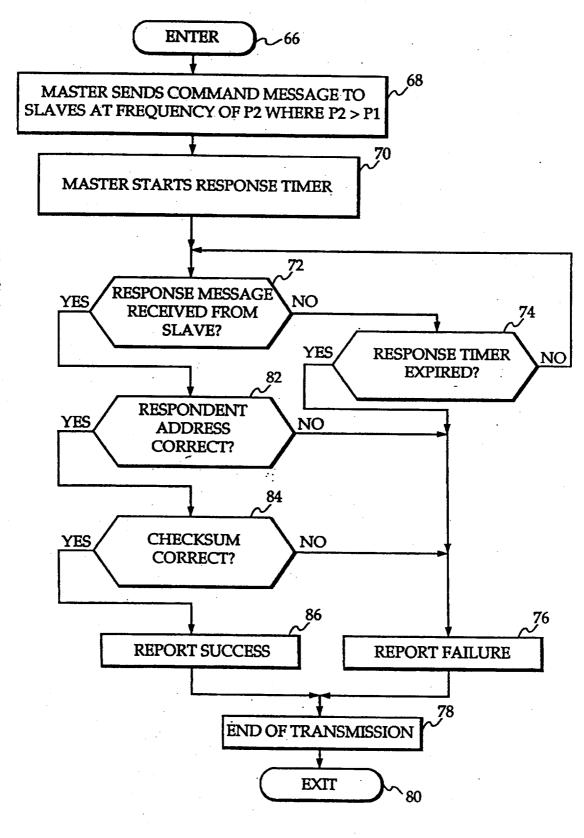


FIG. 4

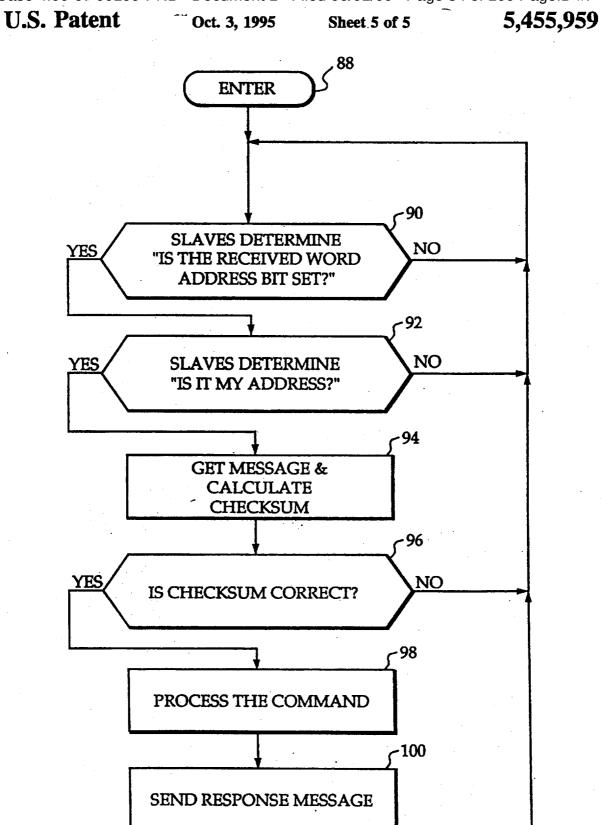


FIG. 5

1

#### SYSTEM FOR COLLECTING FROM MASTERS INFORMATION INDEPENDENTLY COLLECTED FROM ASSOCIATED SLAVES IN SHELVES OF A TELECOMMUNICATIONS TERMINAL

This is a continuation of application Ser. No. 07/844,134 filed on Mar. 2, 1992 now abandoned.

# CROSS REFERENCE TO RELATED APPLICATION

Co-pending patent application U.S. Ser. No. 08/290,619 filed Aug. 15, 1994 entitled "Multiple Function Micro Controller and Apparatus for Using the Same" discloses 15 subject matter which is related to the subject case and is hereby incorporated by reference.

This specification discloses subject matter which is disclosed and claimed in co-pending application U.S. Pat. No. 5,323,145, issued Jun. 21, 1994 filed on the same day as this 20 application. That case is hereby incorporated by reference.

#### **TECHNICAL FIELD**

This invention relates to telecommunications systems, 25 and, more particularly, to a method and means of retrieving inventory and alarms electronically.

#### BACKGROUND OF THE INVENTION

A cross-connect core for a telecommunications network of cross-connects may require a high density span termination system that transceives data. Such may be incorporated in a shelf consisting of a mechanical structure, back plane assembly, cabling, connectors and miscellaneous mechanical hardware. It may be designed to mount in a rack for containing a variable number of plug-in units which may be of different types. It may be designed so that no particular loading order is required so that in depopulated shelves, printed board assemblies may be plugged-in in any desired position.

One of the positions may be designed to accept a system alarm unit, for example, in the form of a plug-in printed board assembly. Such may be powered from a battery in a central office using a common return, for example. The shelf metal work may be connected to frame ground.

One or more of such termination systems may be connected to a cross-connect core for switching low speed signals such as DS-1 signals into and from a DS-1 interface of a high speed transport frame such as OC-1 for transmission to other cross-connects at other locations.

A basic requirement of such a termination system is to provide a low cost method of retrieving inventory (a record of plug-in unit types) electronically. Because there may be many such termination system units connected to a single 55 cross-connect core, it may be burdensome for the network control therein to assume any inventory and alarm retrieval tasks on a regular basis. Moreover, at the beginning at least, not all of the unit positions in a given shelf will be used and an inventory and retrieval architecture must thus be designed 60 to allow for growth while at the same time not overburdening system computational requirements at the early stage. And, it would be desirable to accomplish all of this at low cost. Thus there is a primary problem in designing an architecture that must provide basic electronic inventory and 65 alarm retrieval at a low cost for an initial product while allowing the system to be upgraded with later plug-in unit

2

options so the system supports electronic provisioning (electronically controlling a units transmission parameters and/or functionality).

Secondly, because of a potential for a large number, e.g., sixteen termination systems that may be connected to the cross-connect core, the architecture must minimize the amount of additional processing required by the telecommunication system network element which, without limitation, in the case illustrated, is a loop carrier cross-connect core having a dual network controller that carries out the network control function.

Lastly, the architecture should be of such a design, that it allows processors of various types and computational power to communicate over any interface therein.

#### DISCLOSURE OF INVENTION

According to the present invention, separate pluralities of slaves are polled for status information by means of associated masters at a first periodic rate, on the order of hundreds of milliseconds, while the associated masters are polled for the status information at a second periodic rate on the order of seconds.

In further accord with the present invention an apparatus for carrying out the present invention may comprise a plurality of slave units, each having a selected address and each-being responsive to relatively frequent slave address polling signals from an associated master unit, each slave providing, in response to a matching slave address and slave address polling signal, a slave response signal containing selected status information wherein the master is responsive to the slave response signals for providing selected slave response signals in response to a relatively infrequent master unit address polling signal, the master unit having a selected master address.

A network control may provide the master unit address signal and may be responsive to the selected slave address status response signals from the master unit. Moreover, a plurality of master units and associated slave units may be connected to the network control for inventory and alarm retrieval purposes as outlined above.

In an existing cross-connect core product of assignee, for example, a high speed multi-processor serial interface may be used as the point of interface for a plurality of termination systems each having a master and associated plurality of slaves. Thus, the control connected to the high speed multi-processor serial interface within several of assignee's existing products may be used to connect a plurality of termination systems and may poll the masters in each termination unit at a relatively infrequent rate, e.g., every 5 seconds, while the individual masters within each termination unit poll their associated slaves at a much higher rate, e.g., on the order of every 200 milliseconds.

In the assignee's existing products, the multi-processor serial interface is actually redundant. According further to the present invention, the multi-processor serial interface may be multiplexed from the cross-connect core to a single bus to reduce cost and complexity of wiring. Thus, the connection between the multi-processor serial interface and the various termination system units comprises a time multiplexed single serial bus version of the separate, redundant buses within the core itself.

Also, according to the present invention, the single-ended TTL levels of the redundant buses within the core may be converted to differential pairs, one pair for the transmit direction and another pair for receive. Such a bus, may be

3

characterized as a balanced serial link interface (BSLI) which may be compatible with the Electronic Industry Association (EIA) RS-485 standard. At the other end of the BSLI, i.e, at the termination units, the balanced pairs may be converted to single-ended TTL levels for processing by the 5 master alarm units in each termination unit. The master units may also transmit response messages to the network controller within the cross-connect core over the BSLI.

Within the termination units themselves, a data link for inventory and alarms may be provided by a bus similar to the multi-processor serial interface but operating at a lower speed which may be called the low speed serial link interface (LSSLI). The LSSLI may use single-ended TTL level transmit and receive lines, operating at for example, 32 kb/s as opposed to for example, 128 kb/s for the multi-processor 15 serial interface.

The master alarm unit within each termination unit collects and stores inventory and alarms from all other slave units in the shelf independently of the network controller within the cross-connect core. The cross-connect core network controller periodically polls the master units to determine if any changes have occurred in the status of the shelves plug-in units. If not, no additional data need be transferred.

These and other objects, advantages and improvements according to the present invention will become apparent in light of the detailed description of a best mode embodiment thereof and in light of the drawing which is described in brief below.

#### BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an illustration of a network control interconnected to a plurality of master units each having a plurality of slaves associated therewith.

FIG. 2 is an illustration of a series of steps carried out by the network control in polling the masters.

FIG. 3 is an illustration of a series of steps carried out by the individual masters in responding to the polling command from the network controller.

FIG. 4 is an illustration of a series of steps carried out by each master in polling their associated slaves.

FIG. 5 is an illustration of a series of steps carried out by each slave in responding to polling signals from their 45 associated masters.

#### BEST MODE OF THE INVENTION

In FIG. 1, an alarm collection and inventory architecture 10 is shown in detail within a central office (CO) termination shelf 12 which, among a plurality of shelves 14, . . . , 16, which, together with a balanced serial link interface (BSLI) 18 comprise an alarm collection and inventory retrieval architecture 20, according to the present invention. Although the architecture is shown in the context of a cross-connect it should be realized that it could be used elsewhere as well.

A cross-connect core 22 includes a multi-processor serial interface 24 which communicates with a switch matrix 26a, 26b (which is shown as being redundant but need not be), a redundant network control 28a, 28b (which need not be redundant), a clock 30a, 30b, a COA 32 and an alarm control unit (ACU) 34.

The cross-connect core is shown having an architecture which is peculiar to and common within a product line of 65 Assignee hereof. However, it should be understood that the architecture of such a cross-connect core need not be exactly

4

as shown in the figure but could be arranged in any number of different ways to accomplish the cross-connect function thereof. It should also be understood that the cross-connect core 22 contains many other functional blocks which are not shown here because of a lack of relevance to the present invention. Nevertheless, various patents and co-pending applications of Assignee describe such cross-connect functional elements such as U.S. Pat. No. 5,060,229 entitled "Serial Transport Frame Format Method"; U.S. Pat. No. 5,014,268, entitled "Parallel Timeslot Interchanger"; U.S. Pat. No. 5,161,152, entitled "High Speed Synchronous Transmission Access Terminal"; and U.S. Pat. No. 5,185, 736, entitled "Synchronous Optical Transmission System", among others cross-referenced therein, all of which are hereby incorporated by reference. Also incorporated by reference is U.S. Ser. No. 08/290,679, filed Aug. 15, 1994, entitled "Multiple Function Micro-Controller and Apparatus for Using the Same" which performs multiple functions including inventory functions.

Although we provide a description of the multi-processor serial interface protocol hereinafter, it should be realized that various other protocols, communication topologies, physical layers and data link layers may be provided equally well for other embodiments of the present invention. In other words, the role of the cross-connect core, in the present invention is of minor importance and various other similar devices may be used in a way that takes advantage of the teachings hereof which primarily involve the alarm collection architecture 10 of the termination shelves and the inventory retrieval architecture 20 with respect to the termination shelves or similar devices which need to be inventoried or have their alarm informations collected by a network controller.

In light of the above therefore, the communication topology of the particular cross-connect core 22 used in the embodiment shown herein, is multi-drop line with one master and multiple slaves. In other words, the network control 28a, 28b is the master with the switch matrix 26a, 26b, the clock 30a, 30b, the COA 32 and the ACU 34 being the slaves.

For the procedural interface of the physical layer, the unit of information is the word. A word is composed of eleven bits and the sequence of bits is to start with the start bit which is always zero, eight data bits starting with the least significant bit, a frame start bit and a stop bit which is always one. The bit rate of the word is 128 kHz and is compatible with 8051 (Intel micro-controller).

At the data link layer, the frame format, comprising the unit of information in this layer, consists of five words beginning with word zero and ending with word four. Word zero is defined as the word with frame start bit equal to one. All other words in the frame must have the frame start bit set to zero. Each word in the frame follows each other word without any time gap.

Communication is initiated by the master by sending a command frame. The command frame is decoded by all the slaves, the selected slave answers the master by sending a response frame in a predefined time interval. The master cannot send another command before it receives response to the previous one or timeout occurs. The network control master protocol algorithm is shown in FIG. 2 and the slave (alarm unit) protocol algorithm is shown in FIG. 3. The network control polls the alarm units relatively infrequently, e.g., on the order of seconds, e.g., once every five seconds.

Thus, after entering in a step 35a, the network master polls the alarm units in the shelves, as shown in a step 35b and starts a timeout counter, as indicated in a step 35c. A step

35d determines if a response packet has been received from a master and, if not, whether the timeout counter has expired or not, as indicated in a step 35e. If no response packet has been received from an alarm unit master and timeout has not yet occurred, then the steps 35d, 35e are repeated until a 5 response packet is received or timeout occurs. With timeout, a failure is reported, as indicated in a step 35f, and an exit is made, as indicated in a step 35g. On the other hand, if a response is received, a step 35h is next executed in order to determine if the address of the responding alarm unit master is the address that was polled in the step 35b. If not, a failure is reported, as indicated in the step 35f, and an exit is made in the step 35g. If the responding alarm unit master address matches that of the polled master, a step 35i is next executed to determine if a checksum related to the received response packet is correct or not. If not, a failure report is made, as indicated in a step 35f and an exit made in step 35g. If the checksum is correct, then a success is reported, as indicated in a step 35j, and an exit is made, as indicated in the step 35g.

From the perspective of each of the alarm unit masters, as indicated in FIG. 3, the routine used for responding to polling queries from the network master, after entering in a step 35k, first determine in a step 35l whether a received word from the network master is a device address. If not, the step 351 is repeated endlessly until a received word is recognized as being a device address. Once this occurs, a step 35m is next executed in which each master determines if the received address word is its own address. If not, step 351 is again executed. If so, the address master obtains the command packet and calculates a checksum, as indicated in a step 35n. If correct, as determined in a step 35o, the 30 message received from the network master is processed, as indicated in a step 35p, and a response packet is sent back to the network master, as indicated in a step 35q. The step 351 is then re-executed. If the step 350 determines that the checksum is not correct, the step 35l would be re-executed directly, and no message processing and no response would take place. The timeout of step 35e of FIG. 2 would then ultimately occur, and a failure reported, as described above.

For embodiments in the context of assignee's product line, network control 28a, 28b performs a remote inventory function. When the equipment inventory status is requested, the network control 28a, 28b will request the installed plug-in units in the repeaters 12, 14, ..., 16 to provide unit base mnemonics and locations along with software part numbers and revision levels.

Various addresses may be assigned to the various units in a given cross-connect core. For example, the ACU 34 may be given an address Ex, the clock unit an address of 8x, and the COA unit may be given an address of xx. Each of these addresses may be accessed by the network control.

For message coding, commands and responses may have similar structures such as previously described in connection with the procedural interface, i.e., having word units composed of eleven bits arranged in five word frames. The first 55 word may include the device address and a function code followed by a page number word and three subsequent words including the information for a given page number. For example, the ACU address Ex can be used as a device address and a functional code of 1110 can be assigned to a 60 remote inventory functional code. This functional code may be used to retrieve the remote inventory information. The next word may comprise an eight bit page number, for example covering pages anywhere from 0 through 128. These pages may be given various meanings which can be 65 interpreted in any remote inventory informational structure that is desired. For example, page number 0 may mean a

6

read storage format. Page number 1 could read the digits 3 and 4 of manufacturer I.D. while digits 1 and 2 of the manufacturer I.D. might be contained in page number 2. A supplier code could be covered by page number 3. A unit part number may be covered by several pages as well as a serial number, a CLEI code, a programmed date, a revision level, a checksum, an inservice log function, etc.

In response, the unit being queried will respond with the requested information with data organized in a similar five word frame format, for example, using the first two words to echo back data received on the input frame and using the remaining words to send the information requested according to the function.

Alarm units 40, 42, ..., 44, each contain a processor and control unit including memory for storing the data required by the remote inventory function. The storage format may be a two digit alpha/numerical character that permits the information to be stored in an EEPROM, for example, in different formats for different products. For example, a group of products might use a format "01" and a subunit such as a line card might have a format "02".

For each inventory retrieval request after a checksum is verified, the storage format may be checked. If the storage format is unknown, an error message may be returned and the process terminated. The message sent to read the storage format in the particular embodiment shown is to request page number 0 in the command message while the response contains the second and first digits of the storage format in the third and fourth words of the response frame. This is just one example of the various types of inventory commands and responses that have been described previously and need not concern us here.

It will be observed that the alarm control unit 34 contains a multiplexer/demultiplexer 50 responsive as a 2:1 multiplexer to both of the redundant halves of the multi-processor serial interface 24 and responsive as a 1:2 demultiplexer to incoming messages on a balanced serial link interface (BSLI) 18. Rather than connecting both halves of the multi-processor serial interface in a physically separable way, i.e., by running separate wires for each redundant bus to each of the shelves, the present invention teaches the use of a multiplexer/demultiplexer 50 which is capable of switching both redundant buses into one serial bus (and vice versa) so that the redundancy at least at the data level is retained, if not physically. This provides a low cost approach to inventory retrieval and alarm collection. Using this approach, the termination shelves may be redundant or not, as desired. If not, the information is merely duplicative rather than truly redundant.

The ACU 34 is connected to each of the CO termination shelves 12, 14, ..., 16, by means of the balanced serial link interface (BSLI) 18 to form an alarm and inventory retrieval architecture 20, according to the present invention.

The multi-processor serial interface 24 may be a single-ended TTL signal which is inappropriate in the context of the embodiment for connecting the shelves to the cross-connect core since a more robust signal happens to be required for the distances involved. Therefore, according to the embodiment hereof, a balanced serial interface link 18 is provided. The BSLI represents the single ended TTL signals as a differential pair, one pair for the transmit direction and another pair for receive. This bus is EIA RS-485 compatible, providing the capability to drive up to sixteen repeaters.

Each shelf includes provision for multiple plug-in units so that the system can take a small or a large number of slave units 46, . . . , 48. Because up to sixteen shelves may be

accommodated in the particular embodiment shown, according to the present invention, it would be overly burdensome for the network control 28a, 28b to have to individually poll each slave in each shelf, considering for the embodiment shown that there may be up to twenty-nine different slaves 5 with one master alarm unit in each shelf. Thus, according to the present invention, in order to minimize the amount of additional processing required by the network control, in this embodiment located in a telecommunication system network element 22, the each alarm unit 40, ..., 42, 44 is 10 given the task of supervising inventory retrieval and alarm collection for the individual slaves associated with its particular shelf. Thus, the alarm unit 40 in shelf 12 is in charge of slaves 46, ..., 48 while the alarm unit 42 in shelf 14 is responsible for slaves 50, 52, 54, . . . , 56, and so on. 15 Moreover, it should be understood that the interface described is of such a design that it allows processors of different types and computational power, not necessarily the same type of unit in every case, to communicate over this interface.

At the shelf end of the BSLI 18, the alarm units 40, 42, ..., 44 connect to the balanced pairs and convert the signals to single-ended TTL levels on a LSSLI bus 60 and back again. These signals are received and processed by the alarm units. Thus, the alarm units also transmit response messages 25 from the slaves to the network control 28a, 28b.

Thus, within each of the shelves 12, 14, ..., 16, there is a separate low speed serial link interface 60, 62, ..., 64, for collecting inventory and alarms (from addressable slaves) which operates at a lower speed than the multi-processor serial interface 24 in the cross-connect core 22. For example, the multi-processor serial interface 24 might operate at 128 kb/s while the low speed serial links might operate at 32 kb/s. The LSSLIs use single ended TTL level transmit and receive lines. The alarm units 40, 42, ..., 44 collect and store inventory and alarms from all of their associated slave units in their respective repeaters independently of the network control 28a, 28b.

The network control 28a, 28b periodically polls, e.g., 40 every 5 seconds, the alarm units 40, 42, ..., 44 to determine if any change has occurred in the status of the particular shelf's plug-in units. If not, no additional data need be transferred and the computational burden on the network control is tremendously reduced.

Thus, the alarm units use the low speed serial link interfaces to communicate with other units in the shelf. This bus may operate at 32 kb/s, but otherwise is similar to the core's MSI in structure and protocol. The alarm unit is the bus master and all other devices are slaves. The alarm unit initiates all LSSLI transmissions, sending a data burst containing the address of, and data for the target slave. The slave responds by executing the command and returning a transmission containing any requested data. The polling rate may be on the order of, e.g., hundreds of milliseconds, e.g., every two hundred milliseconds.

In addition to performing bit rate and electrical signal format conversion between the MSI and LSSLI, the AU is also intended to off load the processing required at the core. To accomplish this, the AU continuously updates a local 60 record of each plug-in within its respective shelf, reducing the network control processing load and the core's MSI bus traffic. The AU services requests for data from the network control on an interrupt basis. It may include an 80C31 micro-controller as the processor. It may include a watchdog 65 timer to detect the loss of processor sanity, a store memory with, for example, a minimum of 16 kbits of nonvolatile

8

external program storage memory for access by the AU processor and, for example, a minimum of 4 kbits of external data memory for access by the AU processor. Two serial interface ports are required on the AU. One port is connected to the BSLI 18 to provide the network/AU link and the second port connects to the LSSLI 60, allowing inventory and alarm retrieval. The AU may be set up to appear as a slave unit to the core 22 and may transceive data at 128 kb/s over the BSLI interface. The AU may communicate with the core using a selected type code and fixed address. The second, i.e., LSSLI port, is required to interface the slave thereto. There, the AU may transceive serial data at 32 kb/s and according to the protocol to be described below.

As mentioned, the inventory of the AU is performed on the LSSLI bus that collects inventory from the slaves. The AU incorporates an LSSLI transceiver connected to appear as a bus slave device to the AU processor.

The AU may monitor both an A and B -48 volt battery distribution/bus via two of the LSSLI transceiver alarm status inputs. In that case, the AU forwards the battery (assuming, without limitation, a central office battery supply) status to the network control 28a, 28b when requested by a network control alarm query command. The AU processor may read the status of either the A or B -48 volt power distribution via a device and status command. The status of the A power distribution bus may, for example, be transmitted in status bit position one and that for the B bus in status bit position two.

The AU may interface to the LSSLI using four signals. Such signals may include "transmit data", "receive data" "4 MHz oscillator" and "reset". The AU may operate using nominal -48 volt DC power and to minimize down time, the unit may OR the -48 volt A and -48 volt B power distributions. The ORed distributions may feed a single fuse.

According to the present invention, a separate voltage supply, such as +5 volt DC, is generated from the main distribution bus, e.g., -48 volts DC, by a DC to DC power converter which may be within the AU. This supply is used to power on-board circuitry and, according to the invention, to source power to one or more or all of the slave devices within the particular shelf associated with the AU. This powering scheme eliminates nuisance alarms caused by "hot signals" which might otherwise already be on the back plane when the AU is inserted. The powering scheme also has advantages when detecting power failure alarms on the slave units.

In the embodiment shown, because of the plug-in units' limited number of pins, power and cost considerations. previously used methods to detect alarms when plug-in units lost power were not efficient. The present architecture solves this problem and yields other benefits. In this architecture, each slave unit is individually powered from the -48 volt shelf battery distribution bus. However, the alarm unit is common in that it sources power (+5 volts generated by the alarm unit) to all the other slave units in the shelf. The alarm unit also drives the LSSLI inventory bus in transmitting data to and receiving data from the slaves. Because each slave's alarm monitoring circuit is independently powered by the alarm unit's +5 volt source, when one or more slaves lose power (from the -48 volt distribution) their alarm monitoring circuits remain functional. Since half the slaves may be powered by the A-48 volt DC bus and the other half by the B -48 volt DC bus, half the units will remain fully on-line even though half may lose most functions. This system allows any slaves loss of power to be detected by its alarm monitor circuit and reported (transmitted) to the alarm unit via the inventory bus.

A side benefit of this power scheme is the reduced possibility of CMOS circuit latchup as a result of the scheme eliminating "hot signals" on the back plane, as previously discussed when the AU is inserted.

The LSSLI interface protocol will now be described. As 5 mentioned above, the low speed serial link interface is a multi-drop link that transfers data between the bus master (AU) and up to a maximum of 32 slaves, for example. The bus operates in a byte synchronous-bit asynchronous mode, at 32 kb/s. Two lines, one for transmit and one for receive may be used to carry data between the master and slaves. The master retrieves data by sending commands to the slaves and then waiting for a response. A slave may transmit information only after receiving a request from the master.

With respect to bus contention, since all transmit outputs are multiplied, only one slave is allowed to drive the bus at a time. Prior to the start and after the end of a transmission, the addressed slave sets its transmit output to a high impedance state. All other unaddressed slaves must set their transmit output to a high impedance state. To assure that the bus remains in a high state when all slaves are tri-stated the master pulls the bus to logic high.

With respect to data synchronization, as mentioned earlier, the LSSLI bus operates in a byte synchronous-bit asynchronous, meaning that each word is individually synchronized but each bit within the word is captured asynchronously. This synchronization technique requires the transmitter and receiver clocks only to be accurate enough to reliably clock in one data word, since resynchronization will occur for each subsequent word. This allows flexibility in 30 the number of words that may be contiguously strung together to form broader transmission bursts without requiring increased clock accuracy.

Each shelf 12, 14, ..., 16, implementation should provide a distributed clock to all slave devices sourced by the master. Since all transmitters and receivers are then clocked by the same source, effects of drift and jitter are virtually eliminated. The nominal frequency of the distributed clock may be, for example, 4.096 MHz. Each slave may be identified by a 5 bit binary address.

With regard to the software topology for the LSSLI bus in the embodiment shown, the word format is the basic unit of information which is composed of 11 bits. The sequence of bits may be defined as a start bit followed by 8 data bits, an address/data bit and a stop bit. The address/data bit identifies the word as containing address information or data information. The last (stop) bit is always a logic one that marks the end of the word and readies the bus for the next start bit transition.

With regard to frame format, hierarchically, in the embodiment shown, the frame is a broader unit of information than the word. A frame may be composed of six words containing a first word in the form of an address word and all subsequent words containing data or checksum information.

With respect to error timing, communication is initiated by the master sending a command frame to a slave. The slave then responds by returning a response frame to the master within a predefined time period. The master cannot send another transmission until either the response frame is received or a timeout occurs. The errorproofness of the interface is ensured by the master sending the command frame a selected number of times, e.g., three times every 60 milliseconds, in the absence of a response.

Due to the repetitive send behavior of the slaves, there can be no history-based responses in a slave's response algo10

rithm unless a slave's maximum number of retries is limited to one. This is required to prevent the transmission of corrupted data to the master.

The master protocol algorithm is shown in FIG. 4 while the slave protocol algorithm is shown in FIG. 5. As mentioned, the polling rate may be selected at any convenient rate such as on the order of hundreds of milliseconds, say, every 200 milliseconds.

Referring first to FIG. 4, after entering in a step 66, a given alarm unit master 40 sends a command message to each of its associated slaves, as indicated in a step 68, at a polling frequency greater than the frequency with which the alarm unit masters are polled by the network control. The repetition rate of the master polling may be on the order of hundreds of milliseconds, while that of the network control may be on the order of seconds. After the master sends the command message to the slaves on the low-speed serial link interface, the master starts a response timer, as indicated in a step 70, to determine whether the particular polled address is present or not. If no response is received during a particular polling cycle, a pair of steps 72, 74 report a failure, as indicated in a step 76, and that particular polling cycle will be ended, as indicated in a step 78, after which an exit is made in a step 80. If one of the slaves responds to the polling address from the master within the timeout period, as determined in the step 72, a determination is next made in a step 82 whether the responding slave is responding with the correct address. If not, a failure is reported in the step 76, and the polling cycle ended, as indicated in the steps 78, 80. After a determination in step 82 that a slave at the correct address has responded to the command message sent out in step 68, then a checksum is calculated in a step 84. If correct, success is reported in a step 86, and the transmission is ended and the routine exited, as indicated in steps 78, 80. If the checksum is not correct, a failure is reported in the step 76, the transmission is ended and the routine exited in the steps 78. 80.

Turning now to FIG. 5, each of the slaves in a shelf will execute the steps shown. After entering in a step 88, a step 90 is executed, in which a slave determines if the command message sent in step 68 of FIG. 4 is an address. If not, step 90 is executed repeatedly until an address command message is received. Once this occurs, a step 92 is executed by the slave to determine if the received address is its own address. If not, step 90 is again executed. If it is the address of the slave, a step 94 is executed to get the rest of the message and calculate a checksum. Once this is done, a step 96 is executed to determine of the checksum is correct or not. If not, step 90 is again executed, and command processing ceases without any response being sent. In that case, the response timer of the loop 72, 74 of FIG. 4 would timeout and an failure reported in step 76. If the checksum is correct, a step 98 would next be executed and the command processed. A response message is then sent back to the alarm unit master 40 on the low-speed serial link interface 60, for example, by a slave 48. The step 90 is again

As mentioned, low speed serial link interface transceiver is included in each alarm unit and slave as an economical micro-controller with software tailored to implement the LSSLI protocol. The software can perform read/write operations to a 93C46 EEPROM via I/O port D. This combination of hardware and software (herein referred to as the transceiver) does not fully exploit the intended uses of the LSSLI bus.

The transceiver implements the following functions:

- 1. Provides read access to any of the EEPROM locations.
- Provides write access to any EEPROM location using a guarded protocol.
- 3. Transmits the processor device type and software version codes to the master.
- Provides an unprotected write command for updating the inservice register.
- 5. Supports format 03 and 04 EEPROM data storage formats
- Retrieves three alarm/status bits with a fourth made available by adding an external AND gate.
- 7. Provides a software restart command.
- Provides a data loopback command for verifying link integrity.

The bus master may communicate with any slave using the transceiver, according to the protocol to be described above as in FIGS. 4 and 5.

As suggested, the command and response definitions may be selected in a manner similar to those described already in 20 connection with the multi-processor serial interface.

The command and response definitions may include loop-back functions wherein a loopback command causes all received data to be captured and retransmitted. All data in the command is echoed in the response. In the particular 25 embodiment described above, the commands and responses are organized in frames having six words of 11 bits each with a START bit first, followed by an address bit and ending with a STOP bit with informational bits in between.

Other functions that have been implemented include a 30 device and status retrieval command that reads the response containing the device type code, software version and status bits of the slave. Another command called restart causes the slave to soft-restart including reinitializing internal registers, checking an application select pin, and reading a slot 35 address. A read inventory command allows the master to read 4 bits of EEPROM data at the specified slave address, starting at the specified EEPROM address range. As described above, in connection with the multi-processor serial interface protocol, the memory may be organized as 40 64 pages of 16 bit registers.

A write in-service command writes two bits of data into an in-service register. A write inventory command allows the master to write 4 bits of EEPROM data the specified slave address, starting at the specified EEPROM address range.

The shelves 12, 14, . . . , 16 described above, may transceive 1.544 Mbit/s data over T1 lines but may also be designed to support extensions of other signals such as serial bus interface signal such as described in co-pending application U.S. Ser. No. (Attorney Docket No. 907-045) entitled "High Speed Port Converter" U.S. Pat. No. 5,060,229 entitled "Serial Transport Frame Format Method" and co-pending application U.S. Ser. No. 07/351,861 entitled "Synchronous Optical Transport System" which are hereby incorporated by reference.

As mentioned, the repeater shelves are powered by two -48 volt DC power distributions designated as "-48 volt A" and "-48 volt B". Fuse requirements are dependent upon the type of printed board assemblies equipped in the shelf. A common ground bus (-48 V RTN) returns current to the 60 office battery. For improved reliability this bus may be equipped with two battery return terminals, but the use of both terminals is of course optional.

As mentioned, the AU position and universal positions 1-15 may but need not be powered from -48 v A. In that 65 case, positions 16-29 and the AU are powered from -48 v B. The AU in that case is the only unit position with both

12

battery distributions (ORed) and available at the back plane.

The internal +5 V power distribution may be connected as a single trace from the AU to each universal (slave) position. Since this is powered by an internal power supply external connections are required. Minus 48 V RTN may be used as the return for +5 v.

Three alarm buses are distributed as wire OR'ed links connecting the AU (position 0) to each universal position. The alarms reported over this bus are fuse alarm, loss of signal and line code error. The signal names for the buses are fuse, alm\*', los alm\*, and err alm\*. The alarm buses intended to operate on -48 v, sourced by the AU. One or more units operating in the universal positions may activate the bus by pulling it low (-48 v RTN).

With regard to alarm outputs, when the shelf is equipped with the AU, 14 alarm output leads are available. The AU generates the alarm outputs based on the state of the internal alarm buses and/or shelf battery voltage failures.

The low speed serial link interface (LSSLI) is a wire ORed link that transfers data between the "smart" AU and the slaves. As further mentioned, the bus operates in a byte synchronous-bit asynchronous mode, at 32 kb/s. As further mentioned, the AU is the master and all others are slaves. The master retrieves data by sending commands to the slaves and then waiting for a response. The slaves may not speak unless first spoken to.

The data is sent in 11 bit words. The first bit is called the "start bit" and always begins as a transition from high to low which signals the start of a word. The start bit remains low for a full bit time (e.g., 31 microseconds). Eight data bits then follow and are interpreted according to the state of the tenth bit, and address/data bit which indicates whether the data in the word is address (if high) or data (if low). The last bit is called the "stop bit" and always a logic high.

After reception of an address word by the slaves, all slaves compare the address value to their address. The slave which has a matching address then must receive, interpret and respond to subsequent command words. All other slaves must continue to monitor the bus for ensuing address words.

The data is normally sent with a checksum value included in the last word. Should a checksum error occur, the slave does not respond. The AU tries to communicate to a particular address up to three times. If after the third try, no response is received it may be assumed that the unit is missing or failed.

For this embodiment of the invention, the interface uses nine pins, two for data, five for address, one for power, and one to supply an oscillator signal to the micro-controller. Data is transmitted by units in the slave positions on a TXD lead and received on a RXD lead. Back plane address pins apply logic 0 (-48 V RTN) and logic one (open pin) such that an incremental binary address (0-28 decimal) is presented on the address pins for positions 1-29, respectively. This approach requires that all ID pins on the printed board assembly be pulled high.

As mentioned, according to an important teaching of the present invention, to gain cost and reliability advantages, +5 volts and the oscillator signal are provided by the AU and supplied to all slave positions.

As also mentioned, the LSSLIs' intended use is for remote inventory, remote provisioning and remote alarm isolation and collection.

The balanced serial link interface (BSLI) is a multi-drop link that transfers data between the "smart" AU and the network control processor. The bus operates in a byte synchronous-bit asynchronous mode at 128 kb/s. The network controller is the master and all AUs are the slaves. The

master retrieves data by sending a command to an AU at a specific address and then waiting for a response. The AU slaves may not speak unless first spoken to. The BSLI interface requires four pins, two for transmit data and two for receive data, the address for the AU may be set on the printed board assembly for the AU. The BSLI allows up to sixteen AUs to be addressed and controlled via a single network control.

Although the invention has been shown and described with respect to a best mode embodiment thereof, it should be 10 realized that other embodiments, changes and modifications thereto may be made while still remaining within the spirit and scope of the claimed invention.

I claim:

- 1. A telecommunications terminal having an automatic 15 inventory retrieval system for collecting inventory and status information relating to printed circuit (PC) boards for use in separate printed circuit board housings of said telecommunications terminal, said telecommunications terminal comprising:
  - a cross-connect core, having network controls for providing master PC board address polling signals that occur at a master polling frequency on a terminal bus for providing the master PC board address polling signals; and
  - a plurality of said PC board housings, each housing for housing PC boards connected to an associated serial link interface wherein said PC boards for each housing include:
    - a plurality of slave PC boards connected to said associated serial link interface, each slave PC board having a selected address in said housing, each slave PC board responsive to slave address polling signals that occur at a slave polling frequency that is greater than said master polling frequency on said associated serial link interface, each slave PC board for providing on the associated serial link interface in response to a matching slave address and slave address polling signal, a slave response signal containing selected inventory and status information; and
    - a master PC board for connection to said terminal bus and to said associated serial link interface, for pro-

14

viding the slave address polling signals on said associated serial link interface and responsive to the slave response signals, for providing said slave response signals on said terminal bus in response to a matching one of the master unit address polling signals, the master PC board having a selected master address;

wherein the cross-connect core is responsive to the slave response signals on said terminal bus from said master PC board for said collecting inventory and status information.

2. A system for collecting status information relating to, printed circuit boards on a terminal bus in a telecommunications terminal having at least one printed circuit board housing for housing said printed circuit boards and a controller to which said at least one printed circuit board housing is connected by said terminal bus, each of said at least one printed circuit board housing having a plurality of circuit boards connected to a housing bus wherein said printed circuit boards include a plurality of slave circuit boards, each slave circuit board having a selected address, each responsive to slave address status request signals provided on said housing bus, each slave unit providing on said housing bus, in response to a slave address status request signal that matches its selected address, a slave address status response signal containing selected status information; wherein said circuit boards include a master circuit board for each of said at least one printed circuit board housing, for providing the slave address status request signals on said housing bus and responsive to the slave address status response signals on said housing bus from the slave circuit boards for providing selected slave address status response signals on said terminal bus in response to a master circuit board address signal on said terminal bus, the master circuit board having a selected master address; said telecommunications terminal having a controller, for providing the master circuit board address signal on said terminal bus and responsive to the selected slave address status response signals from the master circuit board in the at least one printed circuit board housing for said collecting status information.



FORM TX For a Nondramatic Literary Work UNIT				CF	@
	TX		TXU	/	- 1
EFFECTIV	E DATE O	F REGISTRA	TION		
	5	5	0	0	
Mor	th	Day		Year	

II.	Z.	accordance with title 17, United States Code, tregistration has been made for the work identi- The information on this certificate has been	TXU 909 — 296  TX TXU  EFFECTIVE DATE OF REGISTRATION  S Day  Year	
"A I	made a part of the Copyright Office records.    Author:   Copyright Office   Copyright Office   Copyright Office   Copyright   Continuation   Copyright   Copyright   Continuation   Copyright   Copyright   Continuation   Copyright   Copyright   Copyright   Continuation   Copyright   Co			
1	BUILD_TOOLS/DEFINES.	United States of America MK (V.1.1)	E CONTINUATION SHEET.	
	THE	E HILES V		
	PUBLICATION AS A CONTRICOLLECTIVE work in which the contribu	BUTION If this work was published as a contribution to a pation appeared. Title of Collective Work ♥	eriodical, serial, or collection, give information about the	
· · · · · · · · · · · · · · · · · · ·	If published in a periodical or serial p	ive: Volume ▼ Number ▼	Issue Date ▼ On Pages ▼	
2	41 . 11104 -			
	"work made for hire"?	OR Citizen of	THE WORK if the answer to	either ns is
			. Providencemental CIV., Ed. b. Instructions	
MOIF	Computer Program	rietly describe nature of material created by this author in which	h copyright is claimed. V	7.
nder the law, ne "author" of "work made or hire" is enerally the	NAME OF AUTHOR ▼			
mployer, not a employee see instruc- ons). For any art of this ork that was nade for hire.	"work made for hire"?  Yes  No	OR Citizen of Domiciled in	THE WORK  - Anonymous?	oither as is
eck "Yes" in e space		- Julio Louisi III William	reopyright is claimed. •	
ovided, give e employer r other erson for hom the work				
as prepared) "Author" of at part, and ave the ace for dates	"work made for hire"?  Yes  No	OR Citizen of Domiciled in Domi	THE WORK  Anonymous?	ither s is
birth and ath blank.	NATURE OF AUTHORSHIP Br	lefly describe nature of material created by this author in which	copyright is claimed. ▼	
<b>3</b> a	YEAR IN WHICH CREATION C WORK WAS COMPLETED THI	DATE AND NATION OF FIRST PUT  Complete this information to be given to be given to the given to	BLICATION OF THIS PARTICULAR WORK  Pay Year	ation
e instructions ore completing space.	Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075 TRANSFER If the claimant(s) parced	me and address must be given even if the claimant is the same and address must be given even if the claimant is the same and address must be given even in space 4 is (are) different from the author(s) named in the claimant(s) obtained ownership of the copyright. ▼	APPLICATION RECEIVED  MAY 1 2 1111	
	space 2, give a brief statement of how the	e claimant(s) obtained ownership of the copyright. ▼	FUNDS RECEIVED	_

MORE ON BACK 

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
• See detailed instructions.
• Sign the form at line 8.

DO NOT WRITE HERE

• .	and the second of the second o	EXAMINED BY		FORM TX
		CHECKÉD BY	NCE	FOR COPYRIGHT
		L_J Yes		OFFICE USE ONLY
	DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE	SPACE, USE A SEPARATE CONTIN	IUATION SHEET.	
□ Yes   ☑ No a. □ This is th b. □ This is th c. □ This is a c	REGISTRATION Has registration for this work, or for an earlier vol. If your answer is "Yes," why is another registration being sought? (the first published edition of a work previously registered in unpublished efirst application submitted by this author as copyright claimant, changed version of the work, as shown by space 6 on this application. It is "Yes," give: Previous Registration Number.	Check appropriate box.) ▼ ed form.		5
DERIVATIV	VE WORK OR COMPILATION			2 0
ricexisting wa	laterial Identify any preexisting work or works that this work is based	ron or incorporates. •		a 6
Material Adde	ed to This Work. Give a brief, general statement of the material that h	as been added to this work and in which co	pyright is claimed. ♥	See instructions before completing this space.
	• •			IJ
DEPOSIT A Name ♥	CCOUNT If the registration fee is to be charged to a Deposit Accou	int established in the Copyright Office, give Account Number ▼	name and number of Account.	a 7
CORRESPO V. Lawren Alcatel US 1000 Coit		this application should be sent. Name/Ac	idress/Apt/City/State/ZIP ▼	b
Plano, TX	75075		y a series	ř
Area code and da Email ▶	aytime telephone number ▶ 972-519-3735	Fax number ▶ 972-47	7-9328	
CERTIFICA	Check only one ▶ ◀	author other copyright claimant		Ω
	entified in this application and that the statements made application are correct to the best of my knowledge.	owner of exclusive right(s) authorized agent of Alcatel USA, Inc Name of author or other copyright cla	imant, or owner of exclusive right(s) A	U
Typed or print	sted name and date ▼ If this application gives a date of publication in	space 3, do not sign and submit it before tha	it date. 11	-
V. Lawren	nce Sewell	Date	May 4, 2016	<u> </u>
√ x	Handwritten signature (X) ▼	Swell		_
Certificate will be mailed in	Name ▼ V. Lawrence Sewell, Esq. Alcatel USA, Inc.		Complete all necessary spaces     Sign your application in space 8	<b>-9</b>
window envelope to this address:	Number/Street/Apt ▼ 1000 Coit Road City/State/ZIP ▼		Application form     Nonrefundable filing fee in check or payable to Register of Copyrights     Deposit material	July 1, 1999, the
20.000.	Plano, TX 75075		Library of Congress Copyright Office 101 Independence Avenue, S.E. Washington, D.C. 20559-6000	filing fee for Form TX is \$30.

**☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49** 

<sup>17</sup> U.S.C. § 506(e): Any person who knowingly makes a with the application, shall be fined not more than \$2,500. June 1999—200,000 WEB REV: June 1999

e <del>V</del> olume		EXAMINED BY	FORM TX
		CHECKED BY	
		CORRESPONDENCE	FOR COPYRIGHT OFFICE USE ONLY
DO	NOT WRITE ABOVE THIS LINE. IF YOU NEED	MORE SPACE, USE A SEPARATE CONTINUATION SHEET	
PREVIOUS REG  Yes No If you a. This is the first b. This is the first c. This is a change	SISTRATION Has registration for this work, or for an your answer is "Yes," why is another registration being so to published edition of a work previously registered in urt application submitted by this author as copyright claim to the work, as shown by space 6 on this application. The work, as shown by space 6 on this applies," give: Previous Registration Number	earlier version of this work, already been made in the Copyright Office? ought? (Check appropriate box.) ▼ opublished form. nant.	5
DERIVATIVE W Preexisting Materia	ORK OR COMPILATION  I Identify any preexisting work or works that this work	Is based on or incorporates. ▼	a <b>6</b>
			O
Material Added to T	This Work. Give a brief, general statement of the materia	al that has been added to this work and in which copyright is claimed. ¶	See Instructions before completing this space:
DEPOSIT ACCO Name ▼	UNT If the registration fee is to be charged to a Deposi	t Account established in the Copyright Office, give name and number o Account Number ♥	f Account. a 7
Alcatel USA, In 1000 Coit Road Plano, TX 7507	nc.	about this application should be sent. Name/Address/Apt/City/Sta	· D
CERTIFICATION	I* I, the undersigned, hereby certify that I am the	☐ author	
of the work identified	Check only one  d in this application and that the statements made tion are correct to the best of my knowledge.	other copyright claimant owner of exclusive right(s) authorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive	8 sive right(s) ▲
		tion in space 3, do not sign and submit it before that date.	
V. Lawrence Se	written signature (X)		2060
	<i>y</i> =		<b></b>
nailed in Alca vindow Numb envelope to this 1000	e V Lawrence Sewell, Esq. atel USA, Inc. ber/Street/Apt V  0 Coit Road State/ZIP V	Complete all necesses Sign your application  1. Application form 2. Nonrefundable filing payable to Register. 3. Deposit material	in space 8
Plan	10, TX 75075	Library of Congress Copyright Office 101 Independence Ave Washington, D.C. 2055	filing

	EXAMINED BY	FORM TX
	CHECKED BY	<del></del>
	CORRESPONDENCE	FOR
	Yes	COPYRIGHT OFFICE
		USE
DO NOT WRITE ABOVE THIS LINE. I	OU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.	
PREVIOUS REGISTRATION Has registration for this	ork, or for an earlier version of this work, already been made in the Copyright Office?	
<ul> <li>□ Yes Mo If your answer is "Yes," why is another region.</li> <li>□ This is the first published edition of a work previously</li> </ul>	auon being sought? (Check appropriate box.) ▼ gistered in unpublished form.	5
b.   This is the first application submitted by this author as		O
c. 🗋 This is a changed version of the work, as shown by spa If your answer is "Yes," give: Previous Registration Numbe		
DERIVATIVE WORK OR COMPILATION Preexisting Material Identify any preexisting work or work	hat this work is based on or incorporates. ▼	a <b>6</b>
		" h
		See instructions
Material Added to This Work Give a brief, general stateme	of the material that has been added to this work and in which copyright is claimed. $lacktriangledown$	before completing this space.
		Ü
DEBOCIT A COOVER 16		
DEPOSIT ACCOUNT If the registration fee is to be changed   Name ▼	d to a Deposit Account established in the Copyright Office, give name and number of Account Number ▼	Account. a
CORRESPONDENCE Give name and address to which	rrespondence about this application should be sent. Name/Address/Apt/City/Stat	e/ZIP V 1
V. Lawrence Sewell, Esq. Alcatel USA, Inc.		D
1000 Coit Road		•
Plano, TX 75075  Irea code and daysime telephone number ▶ 972-519-3735		har season file
may > 3/5-213-3/33	Fax number ▶ 972-477-9328	*
CERTIFICATION* I, the undersigned, hereby certify the	Onther convictors deliment	0
	owner of exclusive right(s)	Ö
of the work identified in this application and that the statement by me in this application are correct to the best of my knowle	s made authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive	we right/e) A
Typed or printed name and date ▼ If this application gives	of publication in space 3, do not sign and submit it before that date.	
V. Lawrence Sewell	- Mand	ZÓCE
Handwritten signature (X) ▼	Dates / V(CC y - 7	
1 3-	Where Swell	
A		- — — —
Certificate Name V	• Complete all necessar	y spaces
vill be V. Lawrence Sewell, Esq. Alcatel USA, Inc.	• Sign your application is	a space 8
Number/Street/Apt ▼	Application form     Nonrefundable filing is	ee in check or money order As of
o this 1000 Coit Road ddress: City/Siate/ZiP ▼		ee in check or money order As of of Copyrights July 1, 1939, the
Plano, TX 75075	Library of Congress Copyright Office 101 Independence Average	filing fee for Form TX
7 U.S.C. § 506(e): Any person who knowlnoty makes a laise represen	Washington, D.C. 2055	100, S.E. 3-6000 is \$30.

\*17 U.S.C. § 506(e): Any person who knowingly makes a with the application, shall be fined not more than \$2,500. June 1999—200,000 WEB REV: June 1999 PARTED ON RECYCLES PAPER **QU.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49** 

		EXAMINED BY	FORM TX
		CHECKED BY	
		CORRESPONDENCE	FOR
		L_J Yes	COPYRIGH OFFICE USE
	DO NOT WORK A DOWN		ONLY
PREVIOU	DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE S US REGISTRATION Has registration for this work, or for an earlier ver No. If your answer is "Yes" why is another registration belong to	PACE, USE A SEPARATE CONTINUATION SHEET.	
_	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	lêčk appropriate hov ) 👿	
b. 🗆 This is	is the first published edition of a work previously registered in unpublished is the first application submitted by this author as copyright claimant.	form.	J
c. This is	s a changed version of the work, as shown by space 6 on this application. wer is "Yes," give: Previous Registration Number >		
		Year of Registration ▶	
DERIVAT Preexisting	TIVE WORK OR COMPILATION  Material Identify any preexisting work or works that this work is based o		
	y y y source works that this work is based to	n or incorporates, •	a <b>A</b>
			U
Material Ad	dded to This Work Give a brief, general statement of the material that has	been added to this work and in which copyright is claimed.	See instructions before completing this space.
er en		-F3 v8-ma visinica.	b
·r			ម ខេត្តិ
<u>:</u> .			
DEPOSIT Name ▼	ACCOUNT If the registration fee is to be charged to a Deposit Account	established in the Copyright Office, give name and number of Account	
	Acc	ount Number ▼	a <b>7</b>
COPPECE	CONDENCE		
	PONDENCE Give name and address to which correspondence about this ence Sewell, Esq.	application should be sent. Name/Address/Apt/City/State/ZIP ▼	h
Alcatel U 1000 Coi	USA, Inc.		D
	X 75075		· · · · · · · · · · · · · · · · · · ·
	daytime telephone number ▶ 972-519-3735	Fax number ▶ 972-477-9328	e ser en
Email >			,
CERTIFICA	ATION* I, the undersigned, hereby certify that I am the	юг	***************************************
	Check only one ▶   ☐ other	er copyright claimant	0
of the work ic		er of exclusive right(s) orized agent of _Alcatel USA, Inc.	0
	application are correct to the best of my knowledge.	Name of author or other copyright claimant, or owner of exclusive right(s).	_
Typed or prin	nted name and date ▼ If this application gives a date of publication in space	e 3, do not sign and submit it before that date.	<u> </u>
V. Lawre	ence Sewell	Date May 4, 200	0
P	Handwritten signature (X) ▼	Daicy -	
$\sim x$			
<del></del>			
Certificate	Name ♥	• Complete all pecesses seems	
will be mailed in	V. Lawrence Sewell, Esq. Alcatel USA, Inc.	Complete all necessary spaces     Sign your application in space 8	<u> </u>
window envelope	Number/Street/Apt ▼	1. Application form	
to this address:	1000 Coit Road City/State/Zip ▼	Nonrefundable filing fee in check payable to Register of Copyright     Deposit material	or money order As of July 1, 1999,
	Plano, TX 75075	Library of Congress Copyright Office 101 Independence Avenue, S.E.	the filing fee for
		Copyright Office	Form TX



This Certificate issued under the seal of the Copyright

FURM IX For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE REG TXu 909 - 302 EFFECTIVE DATE OF REGISTRATION O 0

Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records. brubeth LIBRARY OF CO **ITE CONTINUATION SHEET.** OFFICIA HTEE OF THIS WORK V United States of America BUILD\_TOOLS/WHIPSOURCE.PL (V.1.1) PREVIOUS OR ALTERNATIVE TITLES ▼ PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work Y If published in a periodical or serial give: Volume V Number ▼ Issue Date W On Pages ▼ NAME OF AUTHOR ▼ DATES OF BIRTH AND DEATH Alcatel USA, Inc. Year Born ▼ Year Dled ▼ AUTHOR'S NATIONALITY OR DOMICILE Was this contribution to the work a WAS THIS AUTHOR'S CONTRIBUTION TO "work made for hire"? THE WORK If the answer to either Yes Yes Citizen of ▶ of these questions is Anonymous? ☐ Yes ☑ No. Domiciled in U.S.A. Pseudonymous? ☐ Yes 🗹 No instructions. NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. Computer Program Under the law NAME OF AUTHOR ▼ the "author" of a "work made DATES OF BIRTH AND DEATH Year Born ▼ Year Died V for hire" is generally the employer, not the employee (see instruc-Was this contribution to the work a **AUTHOR'S NATIONALITY OR DOMICILE** WAS THIS AUTHOR'S CONTRIBUTION TO 'work made for hire"? THE WORK If the answer to eithe ☐ Yes Citizen of ▶ tions). For any of these questions is "Yos," see detailed ☐ Yes ☐ No Anonymous? part of this Domiciled in work that was Pseudonymous? instructions ☐ Yes ☐ No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ "made for hire" check "Yes" in the space provided, give NAME OF AUTHOR ▼ the employer (or other DATES OF BIRTH AND DEATH Year Born ▼ person for whom the work was prepared) Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO as "Author" of 'work made for hire"? THE WORK that part, and If the answer to either ☐ Yes Citizen of of these questions "Yes," see detailed leave the Anonymous? ☐ Yes ☐ No space for dates Domiciled in Pseudonymous? ☐ Yes ☐ No instructions. birth and NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ death blank. YEAR IN WHICH CREATION OF THIS DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK WORK WAS COMPLETED a This information Complete this information Month DNLY if this work has been published. must be given Year in all cases. Day \_\_ \_ Year ■ Nation

See instructions

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ♥

Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright.

APPLICATION RECEIVED O ONE DEPOSIT RECEIVED MAY 0 5. 200 p TWO DEPOSITS RECEIVED **FUNDS RECEIVED** 

MORE ON BACK .

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page. See detailed instructions.



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been

**FORM TX** For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE REGISTRATION



TXu 909 - 299

# L	induce a part of the Copyright Office records.	EFFECTIVE DATE OF REGISTRATION	ION	
	Marybeth Peters	Month Day Year		
OFFI	C' TITTE OF THE PLANT	ATE CONTINUATION SHEET.		
7	BUILD_TOOLS/TARGETS.MK (V.1.1)			
	11-12 _ 1 0 0 0 0 1 7 11 (OL 15 MK (V.1.1)			
	PREVIOUS OR ALTERNATIVE TITLES ▼			
	NAME OF THE OWNER OWNER OF THE OWNER OWNE			
	PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a collective work in which the contribution appeared.   Title of Collective Work ▼	periodical, serial, or collection, give information about the	_	
	A Summer of Contestine Mark A			
	If published in a periodical or serial give: Volume ▼ Number ▼	Issue Date ♥ On Pages ♥		
		Issue Date ♥ On Pages ♥	•	
	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEATH	_	
	Alcatel USA, Inc.	Year Born ▼ Year Died ▼		
	Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE	WASTUS ALTHORS CONTINUE		
	"work made for hire"?  Name of Country  Yes  OR  Citizen of	WAS THIS AUTHOR'S CONTRIBUTION THE WORK If the answer to	O eithe	
	No Domiciled in U.S.A.	— Anonymous? ☐ Yes ☑ No of these question "Yes," see detail	led	
NOTE	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which Computer Program	Pseudonymous? Yes Y No Instructions.		
Under the law,		ich copyright is claimed? • A see a war was a general see		
the "author" of a "work made	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEATH	-	
for hire" is		Year Born ▼ Year Died ▼		
employer, not the employee	Was this contribution to the work a "work made for hire"?  AUTHOR'S NATIONALITY OR DOMICILE Name of Country	WAS THIS AUTHOR'S CONTRIBUTION TO	_	
(see instruc- tions). For any	☐ Yes OR Citizen of ▶	ITE WURK If the answer to a	elther	
part of this work that was	□ No Domiciled in	Yes," see detaile	d	
"made for hire" check "Yes" in	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in white	rh copyright is claimed. ▼		
the space provided, give	NAME OF AUTHOR ▼			
the employer (or other	The state of the s	DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼		
person for whom the work	West	Year Born ▼ Year Died ▼		
was prepared) as "Author" of	Was this contribution to the work a "work made for hire"?  AUTHOR'S NATIONALITY OR DOMICILE Name of Country	WAS THIS AUTHOR'S CONTRIBUTION TO	<del></del>	
that part, and leave the	☐ Yes OR Citizen of ▶	THE WORK If the answer to el	ither	
space for dates of birth and	□ No Domiciled in	Yes," see detaile	1	
death blank.	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which	h copyright is claimed. ▼	_	
7	VEAD TAY SHIPLOY OF THE SHIPLOY OF T		_	
- <b>5</b> a	WORK WAS COMPLETED This information Complete this information	BLICATION OF THIS PARTICULAR WORK	_	
<u>V</u>	1996 must be given ONLY if this work has been published.	Day Year Year		
1	COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same the author given in space 2. ▼	as APPLICATION RECEIVED	DOG	
4	the author given in space 2.   Alcatel USA, Inc.	I MAY !! S ZIII O		
E Company	1000 Coit Road	MAY 05 2000	_	
See instructions before completing	Plano, TX 75075	₩ÃY Ω 5, 2ΩΩ ↑		

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright.

MIAY 1 TWO DEPOSITS RECEIVED **FUNDS RECEIVED** 

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page.

See detailed instructions.

. Sign the form at line 8.

DO NOT WRITE HERE



For a Nondramatic Literary Work TXu 909-298

**FUKM IX** 

STATE OF THE LI	This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.  **Marybeth** Peters**	TX  EFFECTIVE DATE OF REGISTRA  5  Month Day	TION O O
ORAR	Y OF COTOR	ATE CONTINUATION SHEET.	
OFFIC.	TITLE OF THIS WORK ▼ United States of America		
	BUILD_TOOLS/MAKEFILE (V.1.1)		
	PREVIOUS OR ALTERNATIVE TITLES ▼		
	PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a collective work in which the contribution appeared. Title of Collective Work ▼	periodical, serial, or collection, give inform	nation about the
	If published in a periodical or serial give: Volume ▼ Number ▼	Issue Date ▼ On I	ages ▼
	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEA	TH
<b>7</b> 2	Alcatel USA, Inc.	Year Born ▼ Year Died	
	Was this contribution to the work a "AUTHOR'S NATIONALITY OR DOMICILE "work made for hire"?	WAS THIS AUTHOR'S CON THE WORK	If the answer to either
•	☐ Yes OR Citizen of Domiciled in U.S.A.		102, 000 0012300
	□ No □ □ Domiciled in □ U.S.A.  NATURE OF AUTHORSHIP Striefly describe nature of material created by this author in when the string of the st	Pseudonymous? Yes No	
NOIE	Computer Program		
Inder the law, he "author" of a "work made or hire" is	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEA Year Born ▼ Year Died	
penerally the employer, not	Was this contribution to the work a "work made for bire"?  AUTHOR'S NATIONALITY OR DOMICILE Name of Country	WAS THIS AUTHOR'S CON	
he employee see instruc-	"work made for hire"? Name of Country  ☐ Yes OR Citizen of ▶	THE WORK  —— Anonymous? ☐ Yes ☐ No	If the answer to either of these questions is
ions). For any part of this vork that was	☐ No Domiciled in	— Pseudonymous? ☐ Yes ☐ No	lanta estima
made for hire" heck "Yes" in	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in wh	hich copyright is claimed. 🔻 😘 💮 💮	transa kan sa katharina. T
he space provided, give he employer or other person for	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEA' Year Born ▼ Year Died	
vhom the work vas prepared) is "Author" of hat part, and	Was this contribution to the work a "work made for hire"?  ☐ Yes  AUTHOR'S NATIONALITY OR DOMICILE Name of Country  OR Citizen of ▶	WAS THIS AUTHOR'S CONTINE WORK  Anonymous?	If the answer to either
eave the pace for dates	□ No Domiciled in	— Pseudonymous?	of these questions is "Yes," see detailed instructions.
of birth and leath blank.	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in wh		<del></del>
<b>3</b> a	WORK WAS COMPLETED B	PUBLICATION OF THIS PARTICU  Day Year	
/	COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the sar	me as APPLICATION RECEIVED	
4	the author given in space 2. ▼	MALO DI ZUU	
	Alcatel USA, Inc.	ONE DEPOSIT RECEIVED	

See instructions before completing this space.

1000 Coit Road Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

TWO DEPOSITS RECEIVED

- MORE ON BACK ▶ Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
  - · See detailed instructions.
- . Sign the form at line B.



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been

**FURM TX** For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE



TXu 909 - 297

\$ UN	made a part of the Copyright Office records.	EFFECTIVE DA	TE OF REGISTERATION
重	Marybeth Peter PEGISTER OF COPYRIGHT	Month	5 0 0 Day Year
- OFFIC	AL STALL	ITS ATE CONTINUATION	N SHEET.
	TITLE OF THIS WORK ▼ United States of Amer APU/AXM/MAKEFILE (V.1.1)	rica	
_	PREVIOUS OR ALTERNATIVE TITLES ▼		
	PUBLICATION AS A CONTRIBUTION If this work was published as a contribution collective work in which the contribution appeared.    Title of Collective Work ▼	to a periodical, serial, or coli	lection, give information about the
	If published in a periodical or serial give: Volume ▼ Number ▼	Issue Date ▼	On Pages ▼
<b>2</b> a	NAME OF AUTHOR ▼ Alcatel USA, Inc.	DATES OF BIF Year Born ▼	RTH AND DEATH Year Died ▼
NOTE	Was this contribution to the work a "work made for hire"?  Yes  No  NATURE OF AUTHORSHIP  Briefly describe nature of material created by this author in the work as "Work made for hire"?  OR  Citizen of Domiciled in U.S.A.	THE WORK Anonymous?	THOR'S CONTRIBUTION TO  If the answer to eithe  If the answer to eithe  of these questions is  Yes, see detailed instructions.
Under the law, the "author" of a "work made for hire" is	Computer Program  NAME OF AUTHOR ▼		RTH AND DEATH Year Died   V
(see instruc- tions). For any part of this work that was "made for hire" check "Yes" in	Was this contribution to the work a "work made for hire"?  □ Yes □ No  NATURE OF AUTHORSHIP Briefly describe nature of material created by this author is	THE WORK  Anonymous?  Pseudonymous?	THOR'S CONTRIBUTION TO  If the answer to either of these questions is "Yes," see detailed instructions.  I:     Thor's Contribution to the property of the pro
the space provided, give the employer (or other person for	NAME OF AUTHOR ▼	DATES OF BIR Year Born ▼	TH AND DEATH Year Died 🛡
whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.	Was this contribution to the work a "work made for hire"?  ☐ Yes ☐ No  NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in	Anonymous?	THOR'S CONTRIBUTION TO  If the answer to either of these questions is "Yes," see detailed instructions.
<b>3</b> a	YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given fully 1996    Year In all cases.    DATE AND NATION OF FIRS Complete this information on the information of the property of the property of the work of the property of the p	ST PUBLICATION OF TI	
4	COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the the author given in space 2. ▼ Alcatel USA, Inc.	e same as APPLICATIO	ON RECEIVED

1000 Coit Road

Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

MAY 05 2001 TWO DEPOSITS RECEIVED **FUNDS RECEIVED** 

MORE ON BACK >

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page. See detailed instructions.
- . Sign the form at line 8.

	EXAMINED BY FORM TX
	CHECKED BY
	CORRESPONDENCE FOR
	Yes COPYRIGH OFFICE
	USE
DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPA	CE, USE A SEPARATE CONTINUATION SHEET.
PREVIOUS REGISTRATION Has registration for this work, or for an earlier version   Yes Son If your answer is "Yes," why is another registration being sought? (Check   Late of the first published edition of a work previously registered in unpublished for   Late of the first application submitted by this author as copyright claimant.   Late of the work, as shown by space 6 on this application.   If your answer is "Yes," give: Previous Registration Number ▶	n of this work, already been made in the Copyright Office?
DERIVATIVE WORK OR COMPILATION  Preexisting Material Identify any preexisting work or works that this work is based on or	r Incorporates. ▼ a <b>a</b>
Material Added to This Work Give a brief, general statement of the material that has been	n added to this work and in which copyright is claimed. ▼  See instructions before completing this space.
en de la companya de La companya de la co La companya de la compan	Barrier Barrie
DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account esta	ablished to the Congress Office of
Name ▼ Account	and Number ▼ and number of Account.
	A CONTRACTOR OF THE PROPERTY O
CORRESPONDENCE Give name and address to which correspondence about this app V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075	plication should be sent: Name/Address/Apt/City/State/ZIP▼ b
rea code and daysime telephone number ▶ 972-519-3735	The College of College of the Colleg
mail 🕨	Fax number ▶ 972-477-9328
ERTIFICATION* I, the undersigned, hereby certify that I am the	
Check only one ▶ ☐ other co	opyright claimant of exclusive right(s) ized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) A
yped or printed name and date $lacktriangledown$ if this application gives a date of publication in space 3,	
V. Lawrence Sewell	M. 42010
Handwritten signature (X) ▼ // SW)ence	Date Pray 7,2000
,	- Marth
	- Market
ertificate Name V	
ertificate iii be V. Lawrence Sewell, Esq. alled in Alcatel USA, Inc.	Complete all necessary spaces     Sign your application in space 8
ill be alled in indow ivelope  V. Lawrence Sewell, Esq.  Alcatel USA, Inc.  Number/Street/Apt ▼	Sign your application in space 8  1. Application form 2. Nonrefundable filling tea in check or money order &s. of
ill be V. Lawrence Sewell, Esq. alled in Alcatel USA, Inc. Indow Number/Street/Apt ▼	Sign your application in space 8  1. Application form



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE EFFECTIVE DATE OF REGISTRATION 60 brybeth LTE CONTINUATION SHEET.

**FURM TX** 

UFFICIATITE OF THIS WORK ▼ BUILD\_TOOLS/RULES.MK (V.1.1)

United States of America

PREVIOUS OR ALTERNATIVE TITLES \

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the

If published in a periodical or serial give: Volume ▼ Number V Issue Date W On Pages ▼ NAME OF AUTHOR ▼ DATES OF BIRTH AND DEATH Alcatel USA, Inc. Year Born ▼ Year Died 🔻 Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO ."work made for hire"? THE WORK If the answer to either of these questions is "Yes," see detailed Yes Citizen of Anonymous? ☐ Yes ☑ No □ No Domiciled in U.S.A NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. 

\*\*The state of the sta Pseudonymous? ☐Yes 2 No

Under the law, the "author" of a "work made for hire" is generally the employer; not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer for other person for whom the work was prepared) as "Author" of that part, and space for dates

47.30 Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE

work made for hire"? ☐ Yes Citizen of Domiciled in

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK Anonymous? ☐ Yes ☐ No Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH Year Born ▼ Year Died V Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK work made for hire"? If the answer to eithe TI Yes Citizen of Anonymous? ☐ Yes ☐ No □ No Domiciled in

Pseudonymous? NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ☐ Yes ☐ No

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given 1996 

| Year in all cases. a

NAME OF AUTHOR ¥

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK Complete this information ONLY if this work has been published.

ee instructions

death blank

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼ Alcatel USA, Inc.

1000 Coit Road Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

ONE DEPOSIT RECEIVED MAY 0 5 2000 TWO DEPOSITS RECEIVED **FUNDS RECEIVED** 

DATES OF BIRTH AND DEATH

Year Died ▼

If the answer to

instructions.

instructions.

■ Nation

of these questions is

"Yes," see detailed

Year Born ▼

MORE ON BACK >

Complete all applicable spaces (numbers 5-9) on the reverse side of this page.

See detailed instructions.

. Sign the form at line 8.

DO NOT WRITE HERE Page 1 of \_

	EXAMINED BY	FORM TX
	CHECKED BY	
	CORRESPONDENCE	FOR
		OPYRIGHT OFFICE
		USE
DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE	SPACE, USE A SEPARATE CONTINUATION SHEET	
PREVIOUS REGISTRATION Has registration for this work, or for an earlier v	version of this work, already been made to the Committee on the	
☐ Yes ☑ No If your answer is "Yes," why is another registration being sought? ((a. ☐ This is the first published edition of a work previously registered in unpublished	Check appropriate box.) ▼	5
b.   This is the first application submitted by this author as copyright claimant.		J
c.   This is a changed version of the work, as shown by space 6 on this application.  If your property "Yes," also Best to the Park to the		
If your answer is "Yes," give: Previous Registration Number ▶	Year of Registration ▶	
DERIVATIVE WORK OR COMPILATION Preexisting Malerial Identify any preexisting work or works that this work is based	I on or Incorporates. ▼	6
Material Added to This Work Give a brief, general statement of the material that ha	See belong added to this work and in which convicts to the latest of the second	instructions re completing
	b	space.
<ul> <li>In the first of the control of the con</li></ul>		
DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account Name ▼	nt established in the Converget Office give name and a way	
Name ▼ A	Account Number   Account Number of Account.	
		- <b>1</b> -
CORRESPONDENCE Give name and address to which correspondence about the V. Lawrence Sewell, Esq.	his application should be sent: Name/Address/Apt/City/State/ZIP	ovo va <del>tti</del> ri≟si 1
Alcatel USA, Inc.	D	
1000 Coit Road		•
Plano, TX 75075		
vea code and daytime telephone number ▶ 972-519-3735	Fax number ▶ 972-477-9328	
	en e	* .
CERTIFICATION* I, the undersigned, hereby certify that I am the	uthor	<u> </u>
	ther copyright claimant	0
of the work identified in this application and that the statements made	wner of exclusive right(s)	0
by me in this application are correct to the best of my knowledge.	uthorized agent of Alcatel USA, Inc.  Name of author or other copyright daimant, or owner of exclusive right(s)	
yped or printed name and date ▼ If this application gives a date of publication in sp		
V. Lawrence Sewell	pace 3, do not sign and submit it before that date.	
Handwritten signature (X) ▼	Date / May 4, 2000	
	01	
X	well	
ertificate vill be V. Lawrence Sewell, Esq.	Complete all necessary spaces     Sign your application in apace 8	<b>'</b>
nailed in Alcatel USA, Inc.	out i your approximent as space &	3
nvelope	Application form     Normandable Stine for it about a common state of the common	40.01
othis 1000 Coit Road ddress: City/State/ZiP ▼	Application form     Nonvitundable filing fee in check or money order payable to Register of Copyrights     Deposit material	July 1, 1999,
Plano, TX 75075		filing
/ U.S.C. § 506(e): Any person who knowledge makes a false	Library of Congress Copyright Office 101 Independence Avenue, S.E. Washington, D.C. 20559-6000	fee for Form TX is \$30.
THE RESIDENCE OF THE PROPERTY		



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

**FUKM 1X** For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE TXu 909-303 EFFECTIVE DATE OF REGISTRATION

) OF	ARY OF CONCRET		DEGIS=-		<b></b>		Ye
7	TITLE OF THIS WORK V		DECIGIED OF	E CODVDICHTO	ATE CONTINUA	TION SHEET.	
	BUILD_TOOLS/WHIP.	PL (V.1.1)	United S	tates of America			
	PREVIOUS OR ALTERNA	TIVE TITLE					
	PUBLICATION AS A CON	TDIDIUM					
	PUBLICATION AS A CON collective work in which the con	tribution appeared.	ork was published a Title of Collective	as a contribution to a p Work ▼	eriodical, serial, or	collection, give info	mation about
	If publish the					_	) juoda nome
	If published in a periodical or se	ial give: Volume ♥	Number ▼				
			Mannet A		Issue Date V	0-	Pages ▼
	NAME OF AUTHOR ▼					On	rages ▼
	Alcatel USA, Inc.				DATECOER		
The second second					Year Born ▼	IRTH AND DEA	TH
	Was this contribution to the work	a AITHODICNA	777.014			Year Die	d▼
	work made for hire"?	AUTHOR'S NA	TIONALITY OF	ROMICILE	WASTHICA	I Providence	
** ** * **	. ✓ Yes	OR Citizen of	,		THE WORK	UTHOR'S CON	TRIBUTION
3 CH 1	□ No.				_		II OB Answer
)TF	NATURE OF AUTHORSHIP	Briefly december	D.0.A.		- Pseudonum	⊔ Yes Mar No	of these quest "Yes," see det
the law;	Computer Program	- restrict nature o	of material created i	by this author in which	Conversion to a tal	☐ Yes ☑ No	instructions.
uthor" of	NATURE OF AUTHORSHIP Computer Program NAME OF AUTHOR		1 6 F (935)	by this author in which	. copy igni is claim	<b>de V</b> ergagorie gi <sub>er</sub> a. Stern autopole giama	alika kataja
k made	) .					the state of the state of the	11 March 2011
lly the	<i></i>				Year Born ▼	RTH AND DEAT	H
er, not	Was this contribution to the work a	A 7 mms	4 40		real porn w	Year Died	¥
ployee	"work made for hire"?	AUTHOR'S NAT	<b>TONALITY OR</b>	DOMICHE	177.0		
Fer any	☐ Yes	OR Citizen of		- C.MICILE	WAS THIS AU THE WORK	THOR'S CONT	RIBUTION
this at was	_ DNo	1 _			<b>A</b>		ILLIE TUT MOL TO
or hire".	NATURE OF AUTHORSHIP  NAME OF AUTHOR	Domiciled in	<u></u>		Anonymous?	☐ Yes ☐ No	Of these auseria
Yes" in ce	- or normonship	Briefly describe nature of	material created by	this and a second	Pseudonymous?	☐ Yes ☐ No	"Yes," see detail
d, giva	NAMEOFALT		- valed by	uns author in which c	copyright is claimed	V <sup>and</sup> er kaker lagge	s etter ettere etter
loyer						7	
or U	to the end through the con-				DATES OF RID	TH AND DEATH	
e work	11/				Year Born ▼	Year Died	1
pared) or of	Was this contribution to the work a	AUTHOD'S MATE	01111			rear Died A	•
and	Work made for blien?	AUTHOR'S NATION Name of Country	JNALITY OR D	OMICILE	WAS THIS AVE	TION	
dates	☐ Yes	OR Citizen of	_		THE WORK	HOR'S CONTR	IBUTION TO
	□ No	J.,					the answer to el
ink.	NATURE OF AUTHORSHIP B	riefly describ			Pseudonum	☐ Yes ☐ No	Yes," see detailed
					~~~uuuniymous?	☐ Yes ☐ No	nstructions.

WORK WAS COMPLETED This information must be given in all cases. Complete this information ONLY if this work has been published. ATION OF THIS PARTICULAR WORK -- Day▶ -COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as Alcatel USA, Inc.

e instructions

Plano, TX 75075 TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

**⋖** Nation APPLICATION RECEIVED

MAY () 5, 2 (1) (1)

ONE DEPOSIT RECEIVED MAY 05 2000 TWO DEPOSITS RECEIVED FUNDS RECEIVED

1000 Coit Road

- MORE ON BACK ▶ Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
  - . Sign the form at line 8.

DO NOT WRITE HERE

	EXAMINED BY	FORM TX
	CHECKED BY	
	CORRESPONDENCE	FOR
	Yes	COPYRIGHT OFFICE
		USE
DO NOT WRITE ABOVE THIS LINE. IF YO	U NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.	
FREVIOUS REGISTRATION Has registration for this work	Or for an earlier version efektion to the	
☐ Yes Mo If your answer is "Yes," why is another registration.  a. ☐ This is the first published edition of a work previously regist.	VII DELIIK SOURRIC IC. Neck annronriata hov ) W	<b>5</b>
<ul> <li>b.    ☐ This is the first application submitted by this author as copyr</li> </ul>	right claimant.	J
c.  This is a changed version of the work, as shown by space 6 or	n this application.	
If your answer is "Yes," give: Previous Registration Number	Year of Registration ▶	•
DERIVATIVE WORK OR COMPILATION		
Preexisting Material Identify any preexisting work or works that	this work is based on or incorporates. ▼	
	·	h
		See instructions
Material Added to This Work Give a brief, general statement of the	he material that has been added to this work and in which copyright is claimed. 🔻	before completing this space.
en de la companya de	to the process of the state of	)
DEPOSIT ACCOUNT If the registration fee is to be charged to Name ▼	a Deposit Account established in the Copyright Office, give name and number of Account.	يستسدين والسائد
	Account Number ▼	. 7
CORRESPONDENCE Give name and address to which corresp V. Lawrence Sewell, Esq.	pondence about this application should be sent. Name/Address/Apt/City/State/ZIP▼	<b>.</b>
Alcatel USA, Inc.		)
1000 Coit Road		
Plano, TX 75075		
Area code and deytime telephone number ▶ 972-519-3735	Fax number ▶ 972-477-9328	· · · · · · · · · · · · · · · · · · ·
		•
CERTIFICATION* I, the undersigned, hereby certify that I am t	the author	-
Check only		
of the work identified in this application and that the statements	☐ owner of exclusive right(s)	a
by me in this application are correct to the best of my knowledge.	Mame of author or other copyright claimant, or owner of exclusive right(s) ▲	
yped or printed name and date ▼ If this application gives a date of	facilities and the copyright Galmans, or owner of exclusive right(s) ▲	
V. Lawrence Sewell		
Mandada III and III	Date May 4,2006	
Handwritten signature (X) ▼		
X	Zence Jevell	
ertificate ill be V. Lawrence Sewell, Esq.	Complete all necessary spaces	
alled in Alcatel USA, Inc.	• Sign your application in space 8	_4
Indow Number/Street/Apt ▼	1. Application form	
this 1000 Coit Road	Nonstrundable filing lee in check or money payable to Register of Copyrights     Deposit materia.	order As of July 1, 1999,
City/State/ZiP ▼ Plano, TX 75075		the
	Ubrary of Congress Copyright Office 101 Independence Avenue, S.E. Washington, D.C. 20559-6000	fee for Form TX is \$30.
U.S.C. § 506(e): Any person who knowingly makes a false representation of a	Washington, D.C. 20559-6000	IS \$30.



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

For a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE RI TXu 909 - 304 **EFFECTIVE DATE OF REGIST** 

FUKM IX

BEGISTER OF COPYRIGHTS TE CONTINUATION SHEET. TITLÉ OF THIS WORK ▼ United States of America

		TITLE V	

APU/AXM/MAKEFILE (V.1.9)

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. 

Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ¥ Issue Date ¥ On Pages ♥ NAME OF AUTHOR ▼ DATES OF BIRTH AND DEATH Year Died ▼ Alcatel USA, Inc. Year Born ▼ AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO Was this contribution to the work a THE WORK "work made for hire"? if the answer to eithe of these questions is "Yes," see detailed Yes. Citizen of Anonymous? ☐ Yes 
No Domiciled in U.S.A Instructions Pseudonymous? ☐ Yes 🗹 No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. Revised Computer Program

the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" the space provided, give the employer (or other person for whom the work was prepared)

as "Author" of

that part, and

leave the space for dates

of birth and

death blank

See instructions

before completing this space.

NAME OF AUTHOR ▼

NAME OF AUTHOR ▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Citizen of Domiciled in NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼ WAS THIS AUTHOR'S CONTRIBUTION TO

DATES OF BIRTH AND DEATH

If the answer to either of these questions is "Yes," see detailed ☐ Yes ☐ No Pseudonymous? ☐ Yes ☐ No

Year Born V Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE "work made for hire"? Citizen of ☐ Yes

Domiciled in

THE WORK Anonymous? Pseudonymous?

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

THE WORK

Anonymous?

WAS THIS AUTHOR'S CONTRIBUTION TO If the answer to eith of these questions is "Yes," see detailed ☐ Yes ☐ No

Instructions.

Year Died ▼

☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed.

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information a 1998 must be given ◀Year in all cases.

Complete this information ONLY if this work has been published. Day

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼ Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075

ONE DEPOSIT RECEIVED MAY 0.5, 200 p TWO DEPOSITS RECEIVED

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright.

**FUNDS RECEIVED** 

MORE ON BACK ▶

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
- · See detailed instructions.
- . Sign the form at line B.

■ Natior

	EXAMINED BY	FORM TX
	СНЕСКЕВ ВУ	
	CORRESPONDENCE	FOR
	Yes	COPYRIGHT OFFICE
		USE ONLY
DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MO	DRE SPACE, USE A SEPARATE CONTINUATION SHEET.	
PREVIOUS REGISTRATION Has registration for this work, or for an ear	ller version of this work, already been made in the Convright Office?	
☐ Yes ☑ No If your answer is "Yes," why is another registration being soug a. ☐ This is the first published edition of a work previously registered in unpul	ntr (Check appropriate box.) ♥ blished form.	<b>5</b>
b. This is the first application submitted by this author as copyright claimant		O
<ul> <li>c. ☐ This is a changed version of the work, as shown by space 6 on this applically your answer is "Yes," give: Previous Registration Number</li> </ul>	tion.  Year of Registration ▶	
	,	
DERIVATIVE WORK OR COMPILATION  Preexisting Material Identify any preexisting work or works that this work is be	pased on or incorporates. ♥	a <b>C</b>
APU/AXM/MAKEFILE (V.1.1)		" b
Material Added to This Work Give a brief, general statement of the material th	iat has been added to this work and in which copyright is claimed.	See instructions before completing this space.
Additional Code		b
		ya ili ala asiya Militagan yi d M
		No. 1
DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit A. Name ▼	ccount established in the Copyright Office, give name and number of Account.	
	Account Number ▼	a <b>7</b>
COPPESSONIDENCE CE		
CORRESPONDENCE Give name and address to which correspondence above. Lawrence Sewell, Esq.	out this application should be sent. Name/Address/Api/City/State/ZIP ▼	b
Alcatel USA, Inc. 1000 Coit Road		
Plano, TX 75075	<del>ggi</del> rik i Kasa (186 <mark>1), k</mark> ara (1861) i Kasa (1861) a sa	to the second of
vea code and daytime telephone number ▶ 972-519-3735	Fax number ▶ 972-477-9328	
	en de la companya de La companya de la co	
CERTIFICATION* I, the undersigned, hereby certify that I am the	author	
Check only one 🕨 🗸	☐ other copyright claimant ☐ owner of exclusive right(s)	$\mathbf{x}$
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.	■ Sauthorized agent of Alcatel USA, Inc.	U
, , and a second of the second	Name of author or other copyright claimant, or owner of exclusive right(s) a	<u> </u>
yped or printed name and date ▼ If this application gives a date of publication	in space 3, do not sign and submit it before that date.	
V. Lawrence Sewell	Date /1/Qy 4,200	<u>10</u>
Handwritten signature (X) ▼		<del>-</del>
X	Dewell	· <del></del>
Nadellanda [		
Pertificate vill be V. Lawrence Sewell, Esq.	Complete all necessary spaces     Sign your application in space 8	$\equiv$ <b>Q</b>
nalled in Alcatel USA, Inc. vindow Number/Street/Apt V	1 Anglication form	
nvelope o this 1000 Coit Road	Application form     Norrefundable filing fee in check     payable to <i>Register of Copyrights</i> Deposit material	or money order As of S July 1, 1999,
ddreas: City/State/ZIP ▼	Uprary of Congress	the
Plano, TX 75075	Copyright Office 101 Independence Avenue, S.E. Washington, D.C. 20559-6000	fee for Form TX is \$30.
7 U.S.C. 6 506/e): Any person who knowledge makes a false manager of		

\*17 U.S.C. § 506(e): Any person who knowingly makes a with the application, shall be fined not more than \$2,500. June 1999—200,000 WEB REV: June 1999 PRATEGON RECTELES MPLA

**☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49** 



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

FURM TX For τχυ EFFECTIVE DATE OF REGISTRATION 00 Year

COPYRIGHTS TE CONTINUATION SHEET.

OFFICIA TITLE OF THIS WORK ▼

United States of America

BUILD\_TOOLS/TARGETS.MK (V.1.22)

<b>PREVIOUS</b>			

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. 

Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼

Number ¥

Issue Date V

Year Born ▼

DATES OF BIRTH AND DEATH

DATES OF BIRTH AND DEATH

On Pages ▼

NAME OF AUTHOR ¥

Alcatel USA, Inc.

Yes.

□ No

Was this contribution to the work a "work made for hire"?

AUTHOR'S NATIONALITY OR DOMICILE Citizen of Domiciled in U.S.A

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK If the answer to eith ☐ Yes ☑ No

Year Died 🔻

Anonymous? Pseudonymous? □ Yes NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed.

Year Born ▼

of these questions is Ø No

NOTE

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and

NAME OF AUTHOR ¥

Was this contribution to the work a "work made for hire"?

☐ Yes □ No

Revised Computer Program

AUTHOR'S NATIONALITY OR DOMICILE

Domiciled in

Citizen of

Anonymous?

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK If the answer to elit if the answer to either of these questions is ☐ Yes ☐ No

Year Died ▼

Pseudonymous? ☐ Yes ☐ No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed.

"Yes," see detailed instructions.

NAME OF AUTHOR ▼

Was this contribution to the work a "work made for hire"?

☐ Yes  $\square$  No

**AUTHOR'S NATIONALITY OR DOMICILE** 

Citizen of

Year Born ▼ Year Died ▼

DATES OF BIRTH AND DEATH

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK If the answer to eithe of these questions is "Yes," see detailed Anonymous? ☐ Yes ☐ No

Pseudonymous? NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

instructions. ☐ Yes ☐ No

space for dates

of birth and death blank.

a

YEAR IN WHICH CREATION OF THIS
WORK WAS COMPLETED
This information must be given in all cases.

Complete this information Month NLY if this work has been published.

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

See instructions refore completing this space.

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

ONE DEPOSIT RECEIVED MAY 05 2000

TWO DEPOSITS RECEIVED FUNDS RECEIVED

MORE ON BACK >

. Complete all applicable spaces (numbers 5-9) on the reverse side of this page See detailed instructions.

. Sign the form at line 8.

DO NOT WRITE HERE

■ Natior

		EXAMIN	FORM:
		CHECKE	DBY
		COR	RRESPONDENCE FOR COPYRIC
		Tes Tes	OFFICI USE
	DO NOT WRITE ABOVE THIS LINE II	VOILNEED MORE ORACE WAS	ONLY
PREVIO		YOU NEED MORE SPACE, USE A SEPAR. work, or for an earlier version of this work, already t	ATE CONTINUATION SHEET.
	No If your answer is "Yes," why is another registion for this is the first published edition of a work previously		been made in the Copyright Office?
D. C. IMIS	is the first application submitted by this author as	CODVEIGHT Claimant	
If your ans	is a changed version of the work, as shown by spac swer is "Yes," give: Previous Registration Number		
		Year of I	Registration
Preexisting	TIVE WORK OR COMPILATION  g Material Identify any preexisting work or works	that this work is based on or incorporates.	
BUILD_	TOOLS/TARGETS.MK (V.1.1)	······································	a
			See leafe with
Addition	dded to This Work Give a brief, general statemen nal Code	t of the material that has been added to this work an	See instruction before complete this space.
• • • • • • • • • • • • • • • • • • • •	The state of the state of the state of	and the state of t	ortalis akin juga sa kaja laka kaja <b>b</b> ajaka la
DEPOSIT	ACCOUNT If the registration foods to be		
Vame ▼	in the registration fee is to be charg	ed to a Deposit Account established in the Copyrigh Account Number ▼	it Office, give name and number of Account.
	<u> </u>		a
CORRESP	ONDENCE Give name and address to which or	prespondence about this application should be sent.	Less than the first term of th
V. Lawre Alcatel I	ence Sewell, Esq. JSA, Inc.	Acceptation should be sent.	Name/Address/Apt/City/State/ZIP▼
1000 Coi	it Road		
	X 75075		Professional Control of the Control
mail 🕨	daylime telephone number ▶ 972-519-3735	Fax number	<b>▶</b> 972-477-9328
		<u>. Projection de la companya dela companya dela companya de la companya de la companya de la companya dela companya de la comp</u>	
ERTIFICA	ATION* I, the undersigned, hereby certify that I	am the author	
		only one	0
the work to	dentified in this application and that the statement application are correct to the best of my knowledge	s made authorized agent of Alcate	IISA Inc
		Name of author or other	or copyright claimant, or owner of exclusive debute.
ped or prin	nted name and date ▼ If this application gives a d	ate of publication in space 3, do not sign and submit	is before the de
V. Lawrei	nce Sewell	the state of the s	n before that date.
$\overline{\sim}$	Handwritten signature (X) ▼		Date Nay 7 2000
ン X	1//	sance.	
Λ	La	sione de la come	<u> </u>
rtificate			
i be	Name ▼ V. Lawrence Sewell, Esq.		Complete all necessary spaces
iled in	Alcatel USA, Inc.		• Sign your application in space 8
velope	Number/Street/Apt ▼ 1000 Coit Road		1. Application form
this	City/State/ZIP ▼		Nonrefundable filing fee in check or money order As of peyable to <i>Register of Copyrights</i> Deposit material 1999.
dress:			
dress:	Plano, TX 75075		Library of Congress #the filling Copyright Office fee for 101 Independence Avenue, S.E. Form TX Washington, O.C. 2059-6000 is \$30.

		EXAMINE	D BY	FORM TX
		CHECKED	ВУ	
		CORI	RESPONDENCE	FOR
		Yes		COPYRIGH OFFICE
				USE ONLY
DO NOT	WRITE ABOVE THIS LINE. IF YOU	NEED MORE SPACE, USE A SEPARA	TE CONTINUATION SHEET.	· · · · · · · · · · · · · · · · · · ·
Yes ≝No If your at a. □ This is the first publ b. □ This is the first applic. □ This is a changed ver	RATION Has registration for this work, or nswer is "Yes," why is another registration i ished edition of a work previously registere ication submitted by this author as copyrigition of the work, as shown by space 6 on the live: Previous Registration Number	r for an earlier version of this work, already be being sought? (Check appropriate box.) ▼ ed in unpublished form.  the claimant, his application.	een made in the Copyright Office?	5
DERIVATIVE WORK	OR COMPILATION			
BUILD_TOOLS/M/	ntify any preexisting work or works that this AKEFILE (V.1.1)	is work is based on or incorporates. ▼		a 6
Material Added to This W Additional Code	Vork Give a brief, general statement of the	material that has been added to this work and	i in which copyright is claimed. ▼	See Instructions before completing this space.
**			er en	b
		•.		• •
DEPOSIT ACCOUNT	If the registration fee is to be charged to a	Deposit Account established in the Copyright	Office, give name and number of Account	
		Account Number ▼	By the same ranger of Account.	a <b>7</b>
Alcatel USA, Inc. 1000 Coit Road	Give name and address to which correspond, Esq.	ndence about this application should be sent.	Name/Address/Apt/City/State/ZIP ▼	<b>a</b> b
Plano, TX 75075	ne number ▶ 972-519-3735	Company of the second	TOPA CONTROL OF THE ART TO THE	
mail >	772-319-3733	Fax number (	▶ 972-477-9328	
CERTIFICATION* I, th	ne undersigned, hereby certify that I am the	□ author		
of the work identified in thi	Check only o s application and that the statements made e correct to the best of my knowledge.	ne other copyright claimant owner of exclusive right(s) authorized agent of Alcatel 1	USA, Inc. r copyright claimant, or owner of exclusive right(s) &	8
yped or printed name and	date ▼ If this application gives a date of p	ublication in space 3, do not sign and submit	it before that date.	<del>-</del>
V. Lawrence Sewell	//		_ Dales May 42001	0
Handwritter X — — —	a signature (X) ▼	ence Sevel		_
				•
alled in Alcatel U			Complete all necessary spaces     Sign your application in space 8	<u>_9</u>
this 1000 Coit	Road		Application form     Nonrefundable filing fee in check of payable to <i>Register of Copyrights</i> Deposit material:	or money order As of July 1, 1999,
City/State/ZIP Plano, TX			Dirary of Congress Copyright Office 101 Independence Avenue, S.E.	1999, the filing fee for Form TX
U.S.C. § 506(e): Any person w	the knowingly makes a false representation of a ma	aterial fact in the application for convright registration	Washington, D.C. 20559-6000	is \$30.

	3 <del>-</del>	EXAMINED BY	POR A
		CHECKED BY	FORM T7
		CHECKED BY	
		CORRESPONDENCE	FOR COPYRIGH
		└── Yes	OFFICE
			USE
	DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORI	E SPACE, USE A SEPARATE CONTINUATION SHEET	
PREVIO	US REGISTRATION Has registration for this work, as for an auti-		
	No If your answer is "Yes," why is another registration being sought? is the first published edition of a work previously registered in unpublish	(Check appropriate how) W	
D. L. Inis i	is the first application submitted by this author as copyright claimant.		$\mathbf{J}$
c.  This is	s a changed version of the work, as shown by space 6 on this application	Ia	
11 your ans	wer is "Yes," give: Previous Registration Number	Year of Registration ▶	
DERIVAT	TIVE WORK OR COMPILATION		
Preexisting	Material Identify any preexisting work or works that this work is based	d on or incorporates. ♥	a 🗲
ROILD_	TOOLS/DEFINES.MK (V.1.1)		" h
Mate-1-1	dada mis ili s		See instructions
Addition	dded to This Work. Give a brief, general statement of the material that h Ial. Code	as been added to this work and in which copyright is claimed.	before completing this space.
1000	Server and the Commerce of the control of the contr	in the second of	b
			Angelik Registration of the transport The
DEPOSIT Name ▼	ACCOUNT . If the registration fee is to be charged to a Deposit Accou	int established in the Copyright Office, give name and number of A	Account
		Account Number ▼	a
		and the second s	4
CORRESP V Lawre	ONDENCE Give name and address to which correspondence about the ence Sewell, Esq.	his application should be sent. Name/Address/Apt/City/State	/210 y 1
Alcatel L	JSA, Inc.		<b>D</b>
1000 Coi		4 - \$	
	X 75075	CORPORATION OF THE SECOND CONTRACTOR	and the strong again to the same and the second of the same of the same
mail 🕨	daytime telephone number ▶ 972-519-3735	Fax number ▶ 972-477-9328	g totale significance of the configuration of the c
			Market Control of the
ERTIFICA	ATION* I, the undersigned, hereby certify that I am the	uthor	
	Check only one	ther copyright claimant	0
f the work ic		wner of exclusive right(s)	0
y me in inis	application are correct to the best of my knowledge.	uthorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive	Hobbita A
yped or prir	nted name and date ▼ If this application gives a date of publication in sp	Dare 3 do not also and an in the first	- Agricia A
V. Lawre	nce Sewell	sec 3, do not sign and shomit it before that date.	_
$\overline{}$	Handwritten signature (X) ▼	Date May 4,2	<u>۵۵۵۷</u>
J.,			<del></del>
X		- Jell	
ertificate II be	Name V. Lawrence Sewell, Esq.	Complete all necessary a     Sign your application in sp	paces
iled in	Alcatel USA, Inc.	• Sign your application in si	pace 8
velope	Number/Street/Apt ▼ 1000 Coit Road	Application form     Norrefundable filing fee is	in check or money order As of
this dress:	City/State/ZIP ▼	payable to Register of Q 3. Deposit material	opyrights 1999,
		Library of Congress Copyright Office 101 Independence Avenue, Washington, D.C. 20559-60	the state of the s
	Plano, TX 75075	L County of Congress	fee for



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code,

**FURMIX** TXu 909 - 308

UNITED	attests that registration has been made for the work ide fied below. The information on this certificate has be made a part of the Copyright Office records.	enti-
	made a part of the Copyright Office records.  Warybeth Peter	EFFECTIVE DATE OF REGISTRATION  5 5 0 0  Month Day Year
	DECICTED OF CONVIDIO	TE CONTINUATION SHEET.
1	TATITEE OF THIS WORK ▼ United States of Ame. BUILD_TOOLS/RULES.MK (V.1.12)	rica .
	PREVIOUS OR ALTERNATIVE TITLES ▼	
	PUBLICATION AS A CONTRIBUTION If this work was published as a contribution collective work in which the contribution appeared.    Title of Collective Work ▼	to a periodical, serial, or collection, give information about the
*. *.	If published in a periodical or serial give: Volume ▼ Number ▼	Issue Date ♥ On Pages ♥
<b>2</b> a	NAME OF AUTHOR ▼ Alcatel USA, Inc.	DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼
	Was this contribution to the work a "work made for hire"?  ☐ Yes  ☐ No  AUTHOR'S NATIONALITY OR DOMICIL Name of Country  OR Citizen of ▶ Domiciled in▶ U.S.A.	THE WORK If the enswer to either of these questions is Yes," see detailed
NOTE	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author-Revised Computer Program	in which copyright is claimed.
nder the law, ie "author" of "work made . ir hire" is enerally the	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼
mployer, not e employee ee instruc- ons). For any set of this ork that was nade for hire"	Was this contribution to the work a "work made for hire"?  ☐ Yes ☐ No  NATURE OF AUTHORSHIP Briefly describe nature of material created by this author.	THE WORK  Anonymous? Yes No of these questions is Yes," see detailed instructions.
eck "Yes" in e space		n which copyright is claimed. ▼
ovided, give e employer r other erson for	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼
nom the work as prepared) "Author" of at part, and ave the ace for dates	Was this contribution to the work a "work made for hire"?  ☐ Yes ☐ No ☐ No  AUTHOR'S NATIONALITY OR DOMICILE Name of Country  OR Citizen of ▶ Domiciled in ▶	THE WORK  Anonymous? Yes No "Yes," see detailed instructions.
birth and eath blank.	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author i	n which copyright is claimed. ♥
<b>3</b> a	YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases.  DATE AND NATION OF FIRE Complete this information ONLY if this work has been published.	ST PUBLICATION OF THIS PARTICULAR WORK  Pay Year Year A Nabor
Λ	COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the author given in space 2. ▼	

ONE DEPOSIT RECEIVED Alcatel USA, Inc. 1000 Coit Road MAY 05. 2000 See instructions before completing this space. Plano, TX 75075 TWO DEPOSITS RECEIVED TRANSFER if the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

MORE ON BACK >

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page. . Sign the form at line 8.
- · See detailed instructions.

**FUNDS RECEIVED** 



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identification.

**FURM TX** For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE REGIST TXu 909 - 307

UNIT	fied below. The information on this certificate has been made a part of the Copyright Office records.	- THE SECTION OF THE
<b>#</b>	m The same saping in Cinic Iccolus,	EFFECTIVE DATE OF REGISTRATION
HE LIBRA	Marybeth Peters  PEGISTER OF COPYRIGHTS	5 5 0 0
- OFFI	PEGISTER OF COPYRIGHTS	TE CONTINUATION SHEET
1	United States of America	The state of the s
<u>I</u>	BUILD_TOOLS/DEFINES.MK (V.1.35)	
	PREVIOUS OR ALTERNATIVE TITLES ▼	
	PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a percollective work in which the contribution appeared. Title of Collective Work ▼	
	Title of Collective Work ▼	eriodical, serial, or collection, give information about the
	If published in a particular leave to the second se	
	If published in a periodical or serial give: Volume ▼ Number ▼	Issue Date ♥ On Pages ♥
	NAME OF AUTHOR ▼	and the second of the second o
	Alcatel USA, Inc.	DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼
	Was this contribution to the work a AUTHOR'S NATIONALITY OF DOMINE	rear Born ▼ Year Died ▼
. No S	"Work made for hire"? Name of Country	WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
	☐ Yes OR Citizen of ►	Anonymous?
NOTE	□ No Domiciled in U.S.A.  NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which Revised Computer Program	
Under the law.	Revised Computer Program	copyright is claimed. 🔻
the "author" of a "work made	NAME OF AUTHOR ▼	DATES OF BIRTH AND DEATH
for hire" is	)	Year Born ▼ Year Dled ▼
employer, not the employee	Was this contribution to the work a "work made for hire"?  AUTHOR'S NATIONALITY OR DOMICILE Name of Country	WASTUIS AUTHORIS COM
(see instruc- tions). For any	Yes. OR Citizen of -	WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK If the answer to either
part of this work that was	□ No Domiclied to b	Anonymous?
"made for hire" check "Yes" in	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which	Pseudonymous? Yes No instructions.
the space provided, give	NAME OF AUTHOR ▼	
the employer (or other		DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼
whom the work was prepared)	Was this contribution to the work a AUTHOR'S NATIONALITY OF DOMESTIC	rear Born ▼ Year Died ▼
as "Author" of that part, and	"Work made for hire"? Name of Country	WAS THIS AUTHOR'S CONTRIBUTION TO
leave the space for dates	☐ Yes OR Citizen of ▶	If the answer to either
		·
	NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which c	opyright is claimed. ▼
7	YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information of FIRST PUBL	ICATION OF THE
<b>J</b> a		ICATION OF THIS PARTICULAR WORK
	nas been published.	•
	COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼	APPLICATION RECEIVED
	Alcatel USA, Inc.	MAY U.5. 200 0

See instructions before completing this space. ON COIL ROAD Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

MAY 0 5. 200 n TWO DEPOSITS RECEIVED FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page.

. Sign the form at line 8.



Literary Work	FICE
09 – 306	
	Elf
TXU	1
F REGISTRATION	
500	<b>)</b>
Day	Year
	D9-306  TOLORO SECTION  TOLORO

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records. LIBRARY OF CO **ATE CONTINUATION SHEET.** United States of America OFFICIA HTEE OF THIS WORK ▼ BUILD\_TOOLS/MAKEFILE (V.1.26) PREVIOUS OR ALTERNATIVE TITLES ▼ PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the Title of Collective Work ▼ collective work in which the contribution appeared. On Pages ♥ Issue Date ▼ Number ▼ If published in a periodical or serial give: Volume ♥ DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼ NAME OF AUTHOR ▼ Year Born ▼ Alcatel USA, Inc. AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO If the answer to eithe Was this contribution to the work a THE WORK of these questions is work made for hire'? 🗆 Yes 🛭 No Anonymous? Citizen of ▶ Yes instructions. ☐Yes Ø No U.S.A. Pseudonymous? Domiciled in▶ NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ Revised Computer Program DATES OF BIRTH AND DEATH NAME OF AUTHOR ▼ Year Born ▼ Year Died the "author" of a "work made for hire" is WAS THIS AUTHOR'S CONTRIBUTION TO AUTHOR'S NATIONALITY OR DOMICILE generally the if the answer to either of these questions is Was this contribution to the work a THE WORK employer, not the employee (see instruc-"work made for hire"? ☐ Yes ☐ No "Yes," see detailed Anonymous? Citizen of ☐ Yes Instructions. tions). For any part of this ☐ Yes ☐ No. Domiciled in Pseudonymous? □ No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. work that was "made for hire" check "Yes" in DATES OF BIRTH AND DEATH the space provided, give the employer (or other NAME OF AUTHOR ▼ Year Died Year Born ▼ person for WAS THIS AUTHOR'S CONTRIBUTION TO AUTHOR'S NATIONALITY OR DOMICILE Name of Country whom the work was prepared) Was this contribution to the work a If the answer to either THE WORK work made for hire"? □ Yes □ No as "Author" of - Cuizen of

hat part, and eave the	_	□ Yes □ No	Domiciled		Pseudonymous?	U 162 1140	Instructions.
space for date: of birth and death blank.	•	NATURE OF AUTHORSHIP	=	re of material created by this author in which c			
3	a	1000	This information	DATE AND NATION OF FIRST PUBI Complete this information ONLY If this work has been published.	Day ▶	Year	AR WORK
1		COPYRIGHT CLAIMANT(S) the author given in space 2. ▼ Alcatel USA, Inc.	Name and address m	oust be given even If the claimant is the same as	ONE DEPO	ON RECEIVED Y 0 5 200 0 SIT RECEIVED	

instructions ore completing

1000 Coit Road

Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

i	MAY 0.5. 200.0
ᇎᅩ	MAY 0.5.200 0 ONE DEPÓSIT RÉCEIVED
黑色	MAY 0 5 200 0 TWO DEPOSITS RECEIVED
WRI USE	TWO DEPOSITS RECEIVED
δĒ	FUNDS RECEIVED
80	PUNDS RECEIVED

		EXAMINED	DBY)	FORM TX
		CHECKED	BY	-
		CORR	RESPONDENCE	FOR
		Yes		COPYRIGHT OFFICE
				USE ONLY
DO NOT	WRITE ABOVE THIS LINE. IF YOU NEE	D MORE SPACE, USE A SEPARA	TE CONTINUATION SHEET	
LKEATOO2 KEGI21	RATION Has registration for this work or for	an earlier weetles of this	en made in the Copyright Office?	
	answer is "Yes," why is another registration being dished edition of a work previously registered in	SOURNI (Check appropriate how ) w	•	「 に
b.   This is the first app	lication submitted by this author as copyright cla	ilmant.		J
If your answer is "Yes"	ersion of the work, as shown by space 6 on this a give: Previous Registration Number •	pplication.		
myour market B 1es; [	pve. Frevious Registration Number	Year of Ro	egistration <b>&gt;</b>	
DERIVATIVE WORL	K OR COMPILATION entify any preexisting work or works that this wo			
BUILD_TOOLS/RI	ULES.MK (V.1.1)	rk is based on or incorporates. ▼		a G
				U
Material Added to This \ Additional Code	Work Give a brief, general statement of the mate	rial that has been added to this work and	in which copyright is claimed. ▼	See instructions before completing this space.
42 1 1 1 42 1 1 1 1		egit i kaj stilistoj en kaj graj stilis.	en distribute de la companya della companya della companya de la companya della c	D
				•
DEPOSIT ACCOUNT	If the contribution S. L.			
Name ▼	If the registration fee is to be charged to a Depo	osit Account established in the Copyright Account Number ▼	Office, give name and number of Account.	a <b>7</b>
CORRESPONDENCE	Give name and address to which corresponden	ce about this application should be sent	Nome (Add and Add)	#
V. Lawrence Sewel Alcatel USA, Inc.	l, Esq.	services and all the services are services and services are services and services are services are services and services are services a	Name/Address/Apt/City/State/ZIP ▼	b
1000 Coit Road				_
Plano, TX 75075		ကြောင်းကို မြောင်းသည်။ ကြောင်းကို ကြောင်းကို ကြောင်းကို ကြောင်းသည်။	and the state of t	
vea code and daylime telepho Email ▶	one number ▶ 972-519-3735	Fax number )	▶ 972-477-9328	
CERTIFICATION 1. t	he undersigned, hereby certify that I am the	author		
	Check only one	other copyright claimant		0
of the work identified in th	als application and that the statements made	☐ owner of exclusive right(s)  ■ authorized agent of Alcatel L	ISA Inc	0
y me in this application a	re correct to the best of my knowledge.		copyright claimant, or owner of exclusive right(s) A	
yped or printed name an	d date ▼ If this application gives a date of public	ation in space 3, do not sign and submit to	t hefere that days	
V. Lawrence Sewell			11	
Handwritte	n signature (X) ▼	+ -	_ Date _ May 4 2000	
X	16 des		/	
Λ		the terms of		
ertificate Name ▼				
ill be V. Lawre	ence Sewell, Esq. JSA, Inc.		Complete all necessary spaces     Sign your application in space 8	<b>-</b> 0
indow Number/Stre	DA, IRC.			
this 1000 Coi	t Road		Application form     Nonrefundable filing fee in check or more payable to Register of Copyrights	ney order As of July 1,
idress: City/State/ZIF			payable to Register of Copyrights 3. Deposit material	1999, the
Plano, T	X 75075	· · · · · · · · · · · · · · · · · · ·	Library of Congress Copyright Office 101 Independence Avenue, S.E. Washington, D.C. 20559-6000	filing fee for Form TX
U.S.C. § 506(e): Any person a	who knowingly makes a false representation of a materia	fact in the analication to any winter	Washington, D.C. 20559-6000	le \$30.



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

FURM TX For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE TXu 909 - 309 EFFECTIVE DATE OF REGISTRATION 00

arybeth CIBRARY OF CO TER OF COPYRIGHTS ATE CONTINUATION SHEET. OFFICIAL SPAN TITLE OF THIS WORK ▼ United States of America BUILD\_TOOLS/WHIPSOURCE.PL (V.1.3) PREVIOUS OR ALTERNATIVE TITLES ¥ PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼ If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ♥ NAME OF AUTHOR ▼ DATES OF BIRTH AND DEATH Alcatel USA, Inc. Year Born ▼ Year Died V Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO "work made for hire"? THE WORK If the answer to eithe Yes 🗹 Yes Citizen of Anonymous? ☐ Yes 🗹 No Domiciled in U.S.A □ No Pseudonymous? Instructions ☐ Yes Z No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ Revised Computer Program Under the law, NAME OF AUTHOR ¥ DATES OF BIRTH AND DEATH a "work made for hire" is Year Born ▼ Year Died ▼ generally the amployer, not Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE WAS THIS AUTHOR'S CONTRIBUTION TO the employee "work made for hire"? THE WORK If the answer to eithe of these questions is "Yes," see detailed (see instruc-tions). For any ☐ Yes Citizen of ▶ Anonymous? ☐ Yes ☐ No part of this work that was □ No Domiciled in Instructions Pseudonymous? ☐ Yes ☐ No NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ "made for hire" check "Yes" in the space provided, give the employer NAME OF AUTHOR ▼ DATES OF BIRTH AND DEATH for other Year Born ▼ Year Died V person for whom the work Was this contribution to the work a AUTHOR'S NATIONALITY OR DOMICILE was prepared) as "Author" of WAS THIS AUTHOR'S CONTRIBUTION TO "work made for hire"? THE WORK If the answer to eithe that part, and ☐ Yes Citizen of of these questions is "Yes," see detailed Anonymous? leave the ☐ Yes ☐ No space for dates □ No Domiciled in Pseudonymous? Instructions ☐ Yes ☐ No of birth and death blank. NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼ YEAR IN WHICH CREATION OF THIS DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK WORK WAS COMPLETED This information must be given 1998 Year in all cases. a Complete this information ONLY if this work has been published. Month > Day ■ Nation

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as APPLICATION RECEIVED the author given in space 2. ▼ Alcatel USA, Inc. ONE DEPOSIT RECEIVED 1000 Coit Road MAY 0.5. 200 P Plano, TX 75075 TWO DEPOSITS RECEIVED TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright.

MORE ON BACK

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
- See detailed instructions.

**FUNDS RECEIVED** 

		EXAMINED BY	FORM TX
		CHECKED BY	<u>.</u>
		CORRESPONDENCE	FOR COPYRIGHT OFFICE
	·		USE ONLY
-	DO NOT WRITE ABOVE THIS LINE. IF YOU NEED	MORE SPACE, USE A SEPARATE CONTINUATION SHEET.	· · · · · · · · · · · · · · · · · · ·
PREVIOU	US REGISTRATION Has registration for this work, or for an 'No If your answer is "Yes," why is another registration being s	n earlier version of this work, already been made in the Copyright Office?	
a. 🗌 This is	s the first published edition of a work previously registered in u	npublished form.	5
	s the first application submitted by this author as copyright clain s a changed version of the work, as shown by space 6 on this app		
	wer is "Yes," give: Previous Registration Number	Year of Registration ▶	
DERIVAT	TIVE WORK OR COMPILATION		
	Material Identify any preexisting work or works that this work TOOLS/WHIPSOURCE.PL (V.1.1)	is based on or Incorporates. ♥	a <b>6</b>
			U
Material Ad	dded to This Work. Give a brief, general statement of the materi	al that has been added to this work and in which copyright is claimed. ▼	See Instructions before completing this space.
Addition	iai Code		b
-			ರ ಚಿತ್ರಕಾರಣೆ ಎ
DEPOSIT Name ▼	ACCOUNT If the registration fee is to be charged to a Depos	it Account established in the Copyright Office, give name and number of Account.  Account Number ▼	
			a 7
CORRESP	ONDENCE Give name and address to which correspondence	e about this application should be sent. Name/Address/Apt/City/State/ZiP ▼	
	ence Sewell, Esq. USA, Inc.	Tallor Hadicas / Apr Only State / Zir V	<b>b</b>
1000 Coi	it Road		
Plano, To	A 73073  day≨me telephone number ▶ 972-519-3735		
Email >	V. V	Fax number ▶ 972-477-9328	
			•
CERTIFICA	ATION* I the understand basely and facility		· · · · · · · · · · · · · · · · · · · ·
CERTIFICA	ATION® 1, the undersigned, hereby certify that I am the	□ author □ other copyright claimant	
of the work is	Check only one	☐ other copyright claimant ☐ owner of exclusive right(s)	8
of the work is		□ other copyright claimant □ owner of exclusive right(s)  Ø authorized agent of Alcatel USA, Inc.	8
of the work is by me in this	Check only one  identified in this application and that the statements made  application are correct to the best of my knowledge.	□ other copyright claimant □ owner of exclusive right(s)  ■ authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) ▲	8
of the work is by me in this Typed or pris	Check only one	other copyright claimant owner of exclusive right(s) Mauthorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) A tion in space 3, do not sign and submit it before that date.	8
of the work is by me in this Typed or pris	Check only one  identified in this application and that the statements made  application are correct to the best of my knowledge.  Inted name and date  If this application gives a date of publica	other copyright claimant owner of exclusive right(s) authorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) attornin space 3, do not sign and submit it before that date.	8
of the work is by me in this	Check only one ▶ identified in this application and that the statements made application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date of publications exceeds the statement of	other copyright claimant owner of exclusive right(s) Mauthorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) A tion in space 3, do not sign and submit it before that date.	8
of the work is by me in this	Check only one ▶ identified in this application and that the statements made application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date of publications exceeds the statement of	other copyright claimant owner of exclusive right(s) Mauthorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) A tion in space 3, do not sign and submit it before that date.	8
of the work is by me in this  Typed or pric  V. Lawre	Check only one ▶  Identified in this application and that the statements made application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date of publications ence Sewell  Handwritten signature (X) ▼	other copyright claimant owner of exclusive right(s) Mauthorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) A tion in space 3, do not sign and submit it before that date.	8
of the work is by me in this  Typed or private V. Lawre  Certificate will be	Check only one ▶ identified in this application and that the statements made application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date of publications exceeds the statement of	other copyright claimant owner of exclusive right(s) Mauthorized agent of Alcatel USA, Inc. Name of author or other copyright claimant, or owner of exclusive right(s) A  tion in space 3, do not sign and submit it before that date.  Date Muy 1,2000  -Complete all necessary spaces	8
of the work is by me in this  Typed or pri  V. Lawre  X  Certificate will be mailed in	Check only one ▶  Identified in this application and that the statements made is application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date of publications ence Sewell  Handwritten signature (X) ▼    Mame ▼     V. Lawrence Sewell, Esq.     Alcatel USA, Inc.	owner of exclusive right(s)  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) author in space 3, do not sign and submit it before that date.  Date Muy 1, 2000  Complete all necessary spaces Sign your application in space 8	<b>8</b>
of the work is by me in this	Check only one  identified in this application and that the statements made application are correct to the best of my knowledge.  Inted name and date   If this application gives a date of publications ence Sewell  Handwritten signature (X)    Unrev  Name   V. Lawrence Sewell, Esq.	owner of exclusive right(s)  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)   tion in space 3, do not sign and submit it before that date.  Date Muy + 1000  Complete all necessary spaces Sign your application in space 8	8  9  ney order As of July 1
of the work is by me in this  Typed or price  V. Lawree  X  Certificate will be mailed in window envelope	Check only one  identified in this application and that the statements made is application are correct to the best of my knowledge.  Inted name and date   If this application gives a date of publications ence Sewell  Handwritten signature (X)   V. Lawrence Sewell, Esq.  Alcatel USA, Inc.  Number/Street/Apt   Number/Street/Apt	owner of exclusive right(s)  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) author in space 3, do not sign and submit it before that date.  Date Muy 1, 2000  Complete all necessary spaces Sign your application in space 8	8  9 ney order As of July 1, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1999, 1



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Parybeth

For a Nondramatic Literary Work UNITED STATES COPYRIGHT OFFICE R TXu 909 — 300 EFFECTIVE DATE OF REGISTRATION 00 Year CODVENEUTS ATE CONTINUATION SHEET.

**FURM TX** 

OFFICIAL PEACET

4	TITLE OF THIS WORK ▼		United States of Ame	rica		
	BUILD_TOOLS/WHIP.PL	(V.1.3)	ormed elales of Ame	anca		
	PREVIOUS OR ALTERNATI	VE TITLES ▼			<del></del>	
	PUBLICATION AS A CONTR collective work in which the contrib	IBUTION If this work	was published as a contribution the of Collective Work ▼	n to a periodical, serial, or co	llection, give inform	nation about the
	If published in a periodical or serial	give: Volume ▼	Number <b>▼</b>	Issue Date ▼	On I	Pages ▼
	NAME OF AUTHOR ▼			_		
2 3	Alcatel USA, Inc.			DATES OF BI Year Born ▼	RTH AND DEA Year Diec	TH I ▼
NOTE	Was this contribution to the work a "work made for hire"?  Yes  No.  NATURE OF AUTHORSHIP I Revised Computer Program	OR Citizen of Domiciled In	material created by this author	THE WORK Anonymous? Pseudonymous?	☐ Yes ☑ No	Instructions.
Under the law, the "author" of a "work made or hire" is generally the	NAME OF AUTHOR ▼				RTH AND DEAT Year Died	H
employer, not he employee see instruc- ions). For any eart of this york that was	Was this contribution to the work a "work made for hire"?  ☐ Yes. ☐ No	AUTHOR'S NATINAME of Country  OR  Citizen of Domiciled in	IONALITY OR DOMICILE	WAS THIS AU THE WORK Anonymous? Pseudonymous?	THOR'S CONT	If the answer to either of these questions is "Yes," see detailed
made for hire", heck "Yes" in he space		riefly describe nature of a	material created by this author is	n which copyright is claimed	Yes □ No	Instructions.
rovided, give ne employer or other erson for	NAME OF AUTHOR ▼			DATES OF BIR Year Born ▼	TH AND DEAT Year Died	H V
hom the work as prepared) s "Author" of al part, and ave the	Was this contribution to the work a "work made for hire"?	OR € Citizen of ▶	ONALITY OR DOMICILE	WAS THIS AUT THE WORK Anonymous?	THOR'S CONT	If the answer to either of these questions is
pace for dates birth and	□ No	Domiciled in		Preudon		"Yes," see detailed Instructions.
eath blank.	NATURE OF AUTHORSHIP Br	iefly describe nature of m	naterial created by this author in	which copyright is claimed.	☐ Yes ☐ No	TOURANTS.

for hire employ the em (see in tions). work th made check the spa provide (or othe person whom t was pre as "Auti that par leave th space fo

See instructions before completing his space.

a

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases.

Complete this Inform ONLY if this work has been published. rtion Month >

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK \_ Day \_\_

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as

TRANSFER if the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED MAY 0.5 2000 ONE DEPOSIT RECEIVED MAY 05, 200 n TWO DEPOSITS RECEIVED **FUNDS RECEIVED** 

MORE ON BACK

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
- See detailed instructions.

■ Nation

		EXAMINEDIBY	FORM T
		CHECKED BY	
		CORRESPONDENCE	FOR
		Yes	COPYRIGH
			USE
	DO NOT WRITE ABOVE THIS LINE IS Y	YOU NEED MODE COADE MODE A COMMAND AND A COM	ONLY
PREVIO	JS REGISTRATION Has registration for this wo	YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.  ork, or for an earlier version of this work, already been made in the Copyright Office?	
C . C .	it your answer is res, why is another registra	ation being sought? (Check appropriate box.) ▼	
a. La This is	s the first published edition of a work previously reg s the first application submitted by this author as cop	gistered in unpublished form.	<b>.</b>
c. 🗆 This is	a changed version of the work, as shown by space (	6 on this application.	
If your answ	wer is "Yes," give: Previous Registration Number	Year of Registration ▶	
DFRIVA?	TVE WORK OR COMPILATION		
Preexisting	Material Identify any preexisting work or works th	hat this work is based on or incorporates. ▼	
	rools/whip.pl (v.1.1)	That this work is based on or incorporates.	h
			San January - 17
Material Ad	ded to This Work Give a brief, general statement o	of the material that has been added to this work and in which copyright is claimed. ▼	See instructions before completine this space.
Addition	al Code	The state of the s	)
3 . 27 .		and the control of the state of	STOLEN SHIP
•		$A = \frac{4\pi^2 k}{2\pi}$ . The second $A = \frac{4\pi^2 k}{2\pi}$ .	
DEPOSIT	ACCOUNT If the registration for to to be about		
Name ▼	t the registration fee is to be charged	d to a Deposit Account established in the Copyright Office, give name and number of Account.  Account Number ▼	
		en de la companya de La companya de la co	
CORRESP	ONDENCE Cus pages and add		on y ga kirki — takki ka iyo
		rrespondence about this application should be sent. Name/Address/Apt/City/State/ZIP V	•
Alcatel U 1000 Coi	JSA, Inc.	· · · · · · · · · · · · · · · · · · ·	•
	K 75075	rangan kangan dalam dan pertangan dan kecamatan dan pertangan dan pertangan dan pertangan dan pertangan dan pe Pertangan dan pertangan da	era trada desper
	daytime telephone number ▶ 972-519-3735		eus Asi
vrea cooe and		Fax number ▶ 972-477-9328	
•			
Email 🕨			
Email >	ATION* I, the undersigned, hereby certify that I a		
Email > CERTIFICA	ATION* I, the undersigned, hereby certify that I a	only one	Ω
CERTIFICA	ATION* I, the undersigned, hereby certify that I at Check of the control of the c	only one other copyright claimant  owner of exclusive right(s)	8
CERTIFICA	ATION* I, the undersigned, hereby certify that I a	only one other copyright claimant  owner of exclusive right(s)	8
CERTIFICA  of the work is	ATION* I, the undersigned, hereby certify that I a Check of dentified in this application and that the statements of application are correct to the best of my knowledge.	only one other copyright claimant owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)	8
CERTIFICATION OF the work to by me in this	ATION* I, the undersigned, hereby certify that I a Check of dentified in this application and that the statements of application are correct to the best of my knowledge.	only one other copyright claimant owner of exclusive right(s)  made  and  Mame of authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) te of publication in space 3, do not sign and submit it before that date.	8
CERTIFICATION OF the work to by me in this	ATION° I, the undersigned, hereby certify that I as  Check of dentified in this application and that the statements is application are correct to the best of my knowledge.  Inted name and date ▼ If this application gives a date  Ince Sewell	only one other copyright claimant owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)	8
CERTIFICATION OF the work it by me in this  Typed or print  V. Lawre	Check of dentified in this application and that the statements application are correct to the best of my knowledge.  Interest to the destruction gives a data once Sewell  Handwritten signature (X)	only one other copyright claimant owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) attended to the following of the publication in space 3, do not sign and submit it before that date.  Date May 4, 2000	8
CERTIFICATION OF THE WORK IN THE SECOND OF T	Check of dentified in this application and that the statements application are correct to the best of my knowledge.  Interest to the destruction gives a data once Sewell  Handwritten signature (X)	only one other copyright claimant owner of exclusive right(s)  made  and  Mame of authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) te of publication in space 3, do not sign and submit it before that date.	8
CERTIFICA  of the work it by me in this  Typed or print  V. Lawre	Check of dentified in this application and that the statements application are correct to the best of my knowledge.  Interest to the destruction gives a data once Sewell  Handwritten signature (X)	only one other copyright claimant owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) attended to the following of the publication in space 3, do not sign and submit it before that date.  Date May 4, 2000	8
of the work is by me in this  Typed or print  V. Lawre	Check of dentified in this application and that the statements application are correct to the best of my knowledge.  Interest to the destruction gives a data once Sewell  Handwritten signature (X)	only one other copyright claimant owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) attended to the following of the publication in space 3, do not sign and submit it before that date.  Date May 4, 2000	8
of the work in this yped or print V. Lawre	Check of dentified in this application and that the statements application are correct to the best of my knowledge.  Interest of the dentified in this application gives a date of the dentified in the statements of the dentified in this application gives a date of the dentified in this application gives a date of the dentified in this application gives a date of the dentified in this application gives a date of the dentified in this application gives a date of the dentified in this application are correct to the dentified in this application and that the statements of the dentified in this application are correct to the dentified in the dentified	only one owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) authorized agent of author or other copyright claimant, or owner of exclusive right(s) authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) authorized agent of Alcatel USA, Inc.  Date May 4, 2000  Complete all necessary spaces	8
f the work in y me in this  Year or print  Y. Lawre  A certificate iil be alled in	ATION* I, the undersigned, hereby certify that I as Check of the control of the	only one other copyright claimant owner of exclusive right(s) authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s) te of publication in space 3, do not sign and submit it before that date.  Date May 4, 2000	8
of the work in the work in the work in this yped or print V. Lawre XX ertificate iill be asiled in indow	Check of the description of the control of the con	only one owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)   te of publication in space 3, do not sign and submit it before that date.  Date May 4, 2000  Complete all necessary spaces Sign your application in space 8	- 8 - 9
of the work it by me in this  Typed or print  V. Lawre  Typed or print  Typed or pri	Check of the designed of the property of the Lawrence Sewell  Name ▼ V. Lawrence Sewell, Esq.  Alcatel USA, Inc.  Number/Street/Apt ▼ 1000 Coit Road	only one owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)   te of publication in space 3, do not sign and submit it before that date.  Date May 4, 2000  Complete all necessary spaces Sign your application in space 8	8 7 order As of July 1, 1980
CERTIFICA  of the work it by me in this  Typed or print  V. Lawre	Check of the description of the control of the con	only one owner of exclusive right(s)  made  authorized agent of Alcatel USA, Inc.  Name of author or other copyright claimant, or owner of exclusive right(s)   te of publication in space 3, do not sign and submit it before that date.  Date May 4, 2000  Complete all necessary spaces Sign your application in space 8	Order As of July 1, 1999, 1the lilling fee for Form TX

	Case 4:00-cv-00199-PNB Document 1	Filed 06/01/00 Par FUNDS RECEIVED I MAY 2 4 2	ge 70 of 100 PageID #	: 70
•		EXAMINED BY CORRESPONDENCE	0	FOR COPYRIGHT OFFICE USE ONLY
		BASIC REGISTRATION		
Continuation	RITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A on of:   Part B or  Part C	BEPARATE CONTINUATION S	HEET.	
			•	
Phone (	V. Lawrence Sewell, Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075 Fax (972) 477-935 Count: If the registration fee is to be charged to a Deposit Account	28 Email	ice, give name and number of Accou	nt.
Account Nu				· ———
	Dother copyright claimant duly sutherized agent of	Alcatel USA Sourcing P. Inc., General Pare of author or other copyright claim	ant, or owner of exclusive right(s) 🛦	- <b>F</b>
landwritte	n signature (X) \ \ \ awronce	well		Q
Certificate vill be naited in vindow envelope o this	Name V V. Lawrence Sewell, Esq. Alcatel USA, Inc.  Number/Bress/apt V 1000 Coit Road		- Compute of nacostary spaces - Bign your application in Space F  1. Aspication form 1. Nonethinashin time for in check or money order payedle to Regular of Copyrights	G
iddresa:	CayPata/ZiP V Plano, TX 75075		Listery of Compress Copyright Online 101 Indigenitating Avenue, & B.	forfiling Forts CA to 888.
	(a): Any person who howevery mease a false representation of a material fact in the ac	oplication for copyright registration provided	Weshington, B.C. 2019-4403 by section 400, or in any written electment file	d in connectors
nth the applicat February 2000— VEB REV: June	on, shall be fred rot more than \$2,560.  40,000  Provins be districte range  1999		WU.B. GOVERNMENT PRINTING OFFICE: 20	000-461-113/107

# CERTIFICATIO OF OFFICE PROPERTY OF THE PROPERTY OF THE CONTROL OF

PIUKM (



This Cert 3 issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.



PA PAU VA VAU SR SRU RE TX EFFECTIVE OATE OF SUPPLEMENTARY REGISTRATION

MAY 2 4 2000

bruseth ... ... ... ... CONTINUATION SHEET. OFFICIAL-SEAL ......

Title of Work ▼ APU/AXM/MAKEFILE (V.1.1)

Registration Number of the Basic Registration ▼ TXu 909-297

Name(s) of Author(s) ▼

Alcatel USA, Inc.

Year of Basic Registration ▼

2000

Name(s) of Copyright Claimant(s) ▼

Alcatel USA, Inc.

Location and Nature of Incorrect Information in Basic Registration V

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfe

Incorrect Information as It Appears in Basic Registration ▼

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claiment)

Corrected Information ♥

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction V

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.



Location and Nature of Information in Basic Registration to be Amplified V

Line Number Line Heading or Description

Amplified Information and Explanation of Information

			: 72
		MAY 2 4 20	
		EXAMINED BY	
			FOR COPYRIGHT
		CORRESPONDENCE	OFFICE USE
		REFERENCE TO THIS REGISTRATION ADDED TO	ONLY
		BASIC REGISTRATION DYES D NO	
	ITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A I	BEPARATE CONTINUATION SHEET.	
,UNUMBER	NUI. OF SILE OF GRANC		المحتاث
•			
		•	
	:		
)cres conde	most Clue name and address to which as managed as a basis skill.	and the state of t	
orresponde	nce: Give name and address to which correspondence about this  V. Lawrance Sewell. Reg.	application should be sent.	
orresponde	v. Lawrence Sewell, Esq. Alcatel USA, Inc.	application should be sent.	E
orresponde	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road	application should be sent.	E
hane (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075		E
none (	V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075 - 519-3735	Email	E
tane ( 972 eposit Acco	V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075 - 519-3735		E
hone ( 972 Peposit Acco	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  - 519-3735  Munt: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is a Deposit Account of the registration fee is a Deposit Account of	Email	E nt.
none (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  - 519-3735  Munt: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the registration fee is a Deposit Account of the registration fee is a Deposit Account of	EmailEmailestablished in the Copyright Office, give name and number of Account	-
hone (972, eposit Acco ame ccount Nun	V. Lewrence Sewell, Raq. Alcatel USA, Inc. 1000 Colt Road Plano, IX 75075  - 519-3735  Maint: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerufy that I am the: (Check only one southor	established in the Copyright Office, give name and number of Account	-
hone (972, eposit Acco ame ccount Nun	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plane, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one leauthor where of acciusive right(s) where copyright claimant duly authorized agent of Name of State of Sta	established in the Copyright Office, give name and number of Account of Surcings L.P. by Alcatel US GP_Inc General Partner of exclusive right(s) A	-
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one Deposit of Deposit of Name of the work identified in this application and that the statements ments of the work identified in this application and that the statements ments are considered.	established in the Copyright Office, give name and number of Account of Accou	-
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plane, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one leauthor where of acciusive right(s) where copyright claimant duly authorized agent of Name of State of Sta	established in the Copyright Office, give name and number of Account of Surcings L.P. by Alcatel US GP_Inc General Partner of exclusive right(s) A	F
none (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plane, IX 75075  - 519-3735  Hunt: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am that (Check only one position of the work identified in this application and that the statements mated name   V. Lawrence Sewell, Req.  Page 1000  Page 1000  Name	established in the Copyright Office, give name and number of Account of Accou	F
none (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one powher of anciusive right(s) where copyright claimant duly authorized agent of Name of the work identified in this application and that the statements mated name V. Lawrence Sewell	established in the Copyright Office, give name and number of Account of Accou	F
eposit Account Num ertification  /ped or prir	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one position of the work identified in this application and that the statements meted name  V. Lawrence Sewell  signature (X) V	established in the Copyright Office, give name and number of Account Alcatel USA Sourcing, L.P. by Alcatel US GP_Inc_, General Partner of author or other copyright claimant, or owner of exclusive right(s) A nade by me in this application are correct to the best of my knowledge.  Date \$\forall 5/23/2000	F
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one powher of anciusive right(s) where copyright claimant duly authorized agent of Name of the work identified in this application and that the statements mated name V. Lawrence Sewell	established in the Copyright Office, give name and number of Account of Accou	F
eposit Account Num ertification*  red or printend in the saled in adow	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coft Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerusy that I am the: (Check only one where of exclusive right(s) where copyright claimant under a duly authorized agent of Name of the work identified in this application and that the statements mated name v. Lawrence Sewell signature (X) v. Lawrence Sewell, Esq.	established in the Copyright Office, give name and number of Account Alcatel USA Sourcing, L.P. by Alcatel US GP_Inc., General Partner of author or other copyright claimant, or owner of exclusive right(s) Anade by me in this application are correct to the best of my knowledge.  Date \$\forall 5 / 2 3/2000	F
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mann: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerufy that I am the: (Check only one where copyright claimant duly authorized agent of Name of the work identified in this application and that the statements meted name V. Lawrence Sewell signature (X) V.  Name V. Lawrence Sewell, Esq. Alcatel USA, Inc.	established in the Copyright Office, give name and number of Account Alcatel USA Sourcing, L.P. by Alcatel US GP_Inc., General Partner of suther or other copyright claimant, or owner of exclusive right(s) A nade by me in this application are correct to the best of my knowledge.  Date \$\forall \sum_{\text{Supply of newsery species}}	F G
hone (	V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Munt: If the registration fee is to be charged to a Deposit Account of the registration fee is to be charged to a Deposit Account of the undersigned, hereby certify that I am the: (Check only one position of the work identified in this application and that the statements maked name V. Lawrence Sewell signature (X) V  Name V. Lawrence Sewell, Esq. Alcatel USA, Inc.  Number/Press/Apt V  1000 Coit Road  Cay/Sees/Zip V	established in the Copyright Office, give name and number of Account Alcatel USA Sourcing, L.P. by Alcatel US GP_Inc., General Partner of author or other copyright claimant, or owner of exclusive right(s) Anade by me in this application are correct to the best of my knowledge.  Date \$\forall \subseteq 23/2000 0  - Copyright the property spetch to Repear of Copyright  1. Application long from choose or money order payable to Repear of Copyrights	F
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Manuari of the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerufy that I am the: (Check only one where copyright claimant under the statements of the work identified in this application and that the statements musted name V. Lawrence Sewell signature (X) V.  Name V. Lawrence Sewell, Esq. Alcatel USA, Inc.  Number/Press/Agt V. 1000 Coit Road	Email  Alcatel USA Sourcing, L.P. by Alcatel US  GP_Inc. General Partner  of author or other copyright claimant, or owner of exclusive right(s) & sade by me in this application are correct to the best of my knowledge.  Date V 5/23/2000  - Campleto at noostery spaces  - Employee	F
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerufy that I am the: (Check only one where copyright claimant where of the work identified in this application and that the statements mated name V. Lawrence Sewell signature (X) V  Name V. Lawrence Sewell, Esq. Alcatel USA, Inc.  Number/Press/Apt V  1000 Coit Road  Chy/State/2P V  Plano, TX 75075	Email  established in the Copyright Office, give name and number of Account Alcatel USA Sourcing, L.P. by Alcatel US GP_Inc. General Partner of author or other copyright claimant, or owner of exclusive right(s) A nade by me in this application are correct to the best of my knowledge.  Date V 5/23/2000  - Campleto at noostery spaces  - Representation in Spaces  - Representation in Repair of Capyright  - Campleto Sourcing  - Representation in Repair of Capyright  - Capyright  - Campleto Sourcing  - Capyright	F
hone (	V. Lawrence Sewell, Req. Alcatel USA, Inc. 1000 Coit Road Plano, IX 75075  - 519-3735  Mant: If the registration fee is to be charged to a Deposit Account of the undersigned, hereby cerusy that I am the: (Check only one where copyright claimant duly authorized agent of Name of the work identified in this application and that the statements mated name V. Lawrence Sewell signature (X) V  Name V. Lawrence Sewell, Esq. Alcatel USA, Inc.  Number/Brow/Apt V  1000 Coit Road  Chy/Seas/Zip V  Planto, TX 75075	Email  Alcatel USA Sourcing, L.P. by Alcatel US  GP_Inc. General Partner  of author or other copyright claimant, or owner of exclusive right(s) & sade by me in this application are correct to the best of my knowledge.  Date V 5/23/2000  - Campleto at noostery spaces  - Employee	A of day 1, 1900 for file file file for file day.

. -.-.. ---

ase 4:00 CERTIFICATE OF REGISTRATION Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 This Certific issued under the seal of the Copyright Office in a lance with title 17, United States Code, attests that registration has been made for the work identifled below. The information on this certificate has been

Page





MAY 2 4 2000

GIGTER AF CORVEY CHICATE CONTINUATION SHEET.

United States of Amend

CIORARY OF CO Title of Work ▼

BUILD\_TOOLS/MAKEPILE (V.1.1)

Registration Number of the Basic Registration **V** TXu 909-298

Name(s) of Author(s) V

Alcatel USA, Inc.

Year of Basic Registration ▼

2000

Name(s) of Copyright Claimant(s) ▼

Alcatel USA, Inc.

THE

Location and Nature of Incorrect Information in Basic Registration V

Line Number 24; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfe

Incorrect Information as It Appears in Basic Registration V

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claiment)

made a part of the Copyright Office records.

Corrected Information V

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claiment as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified ¥

Line Number Line Heading or Description

7 : THE CIBRARY OF CO

Casco 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Page 74 of 100 Page ID #: 74

This Certificate issued under the seal of the Copyright Office in a dance with title 17. United States Code, attests that attraction has been made for the field below. The information

TX TX PA PAU VA VAU SR GRU RE EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 2 4 2000

OFFICIATEDAT WHITE MOUVE THIS LINE IF YOU HELD ELETERALE, CORVEYED HEATE CONTINUATION SHEET. Title of Work ▼

BUILD	TOOLS/DEPINES.MK	(V. 1	.1)
	•		,

Registration Number of the Basic Registration  $\nabla$ TXu 909-296

Neme(s) of Author(s) ▼

Alcatel USA, Inc.

Year of Basic Registration \

Name(s) of Copyright Claimani(s) ♥

Alcatel USA, Inc.

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfe

Incorrect Information as It Appears in Basic Registration ¥

Alcatel USA, Inc. (Anthor); Alcatel USA, Inc. (Claimant)

Corrected Information ▼

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction V

To reflect the correct Alcatel entities as author and claiment as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Heading or Description

•	Case 4:00-cv-00199-PNB Document 1 File	ed 0 <del>0/01/00 - Page 75 of 100 Page</del> ID	#: 75
	_	ed 0 (100 Page 10 of 100 Page 10 MAY 2 4 2	
		EXAMINED BY	500
		COARESPONDENCE D	FOR COPYRIGHT OFFICE
			USE
		REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION YES DINO	
O NOT W	RITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEP	ARATE CONTINUATION SHEET.	
ontinuation	on of: O Part B or O Part C		
			1)
			*نست
		•	
	ence: Cive name and address to which correspondence about this appli V. Lawrence Sewell, Emq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075	ication should be sent.	E
Phone (	V. Lawrence Sevell, Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Doubt: If the registration fee is to be charged to a Deposit Account estab	Emeil	Ount.
Phone (	V. Lawrence Sewell, Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Doubt: If the registration fee is to be charged to a Deposit Account estab	Emeil	Ount.
hone (	V. Lawrence Sewell, Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account establishment  The incompanies of the incomp	Emeil  Catel USA Sourcing, L.P. by Alcatel  Linc., General Partner  ther or other copyright claimant, or owner of exclusive right(s).	USA F
hone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account established to the registration fee is to be charged to a Deposit Account established the registration fee is to be charged to a Deposit Account established in the undersigned, hereby certify that I am the: (Check only one)  Souther copyright claimant. Eduly surhorized agent of CP  Name of autorities of the work identified in this application and that the statements made intend name.	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge	USA F
hone (	V. Lawrence Sevell. Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Bount: If the registration fee is to be charged to a Deporit Account established in the registration fee is to be charged to a Deporit Account established:    I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the unde	Emeil  Catel USA Sourcing, L.P. by Alcatel  Linc., General Partner  ther or other copyright claimant, or owner of exclusive right(s).	USA F
Phone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account established to the registration fee is to be charged to a Deposit Account established the registration fee is to be charged to a Deposit Account established in the undersigned, hereby certify that I am the: (Check only one)  Souther copyright claimant. Eduly surhorized agent of CP  Name of autorities of the work identified in this application and that the statements made intend name.	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge	USA F
Phone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account established in the registration fee is to be charged to a Deposit Account established in the undersigned, hereby certify that I am the (Check only one)  Jauthor  Jowner of auchinive right(a)  John copyright claimant. Eduly sutherized agent of Rame of auchinive right (a)  Name of auchinitied in this application and that the statements made inted name  V. Lawrence Sewelli	Email  catel USA Sourcing, L.P. by Alcatel  inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge  Date 5/23/200	USA F
hone (	V. Lawrence Sevell. Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Bount: If the registration fee is to be charged to a Deporit Account established in the registration fee is to be charged to a Deporit Account established:    I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the undersigned, hereby certify that I am the: (Check only one)   I the unde	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge	USA F
Phone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account established in the registration fee is to be charged to a Deposit Account established in the undersigned, hereby certify that I am the (Check only one)  Souther copyright claimant. Eduly sutherized agent of Plane of au  of the work identified in this application and that the statements made inted name V. Lawrence Sewell  signature (X) V. Lawrence Sewell	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knew ledge  Date \$\sqrt{5/23/200}\$  Complement sections a Second 1. Approximation in Second 1. Approximation in Second 2. Approxim	G G
Phone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account estable the registration fee is to be charged to a Deposit Account estable the undersigned, hereby certify that I am the (Check only one)  Bauthor  Downer of exclusive right(a)  Alcatel Grand Sevell  Alcatel USA, Inc.  Name of authorized agent of Grand Sevell  Alcatel USA, Inc.  Name of Sevell  Alcatel USA, Inc.	Emeil  catel USA Sourcing, L.P. by Alcatel  inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge  Date V 5/23/200  Complete et necessary speace  Equipment separate  I. Application in Speece P	USA F
Phone (	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Dount: If the registration fee is to be charged to a Deposit Account estable the registration fee is to be charged to a Deposit Account estable the undersigned, hereby certify that I am the (Check only one)  Bauthor  Downer of exclusive right(a)  Alcatel USA, Inc.  Name of au  Name of au  Inted name V  Lawrence Sewell  Alcatel USA, Inc.	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knew ledge  Date \$\sqrt{5/23/200}\$  Complement sections a Second 1. Approximation in Second 1. Approximation in Second 2. Approxim	G G
Phone (97) Deposit Account Number (197) Depos	V. Lawrence Sewell, Enq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Found: If the registration fee is to be charged to a Deposit Account estable the registration fee is to be charged to a Deposit Account estable the undersugned, hereby certify that I am that (Check only one)  author    or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is undersugned, hereby certify that I am that (Check only one)   or it is under	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  ther or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knowledge  Date \$\frac{5}{23}/260\$  Complete the seed or s	G And
Phone (97) Deposit Account Number (197) Depos	V. Lawrence Sewell, Enq.  Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  2 - 519-3735  Fourit: If the registration fee is to be charged to a Deposit Account established in the undersigned, hereby certify that I am the: (Check only one)  Plauthor  Downer of established right(a)  Find the work identified in this application and that the statements made inted name V  Lawrence Sewell  Alcatel USA, Inc.  Immorrance V. Lawrence Sewell  Alcatel USA, Inc.  Immorrance V. Lawrence Sewell  Alcatel USA, Inc.  Inc.  Inc.  Plano, TX 75075	Email  catel USA Sourcing, L.P. by Alcatel  Inc., General Partner  there or other copyright claimant, or owner of exclusive right(s) by me in this application are correct to the best of my knew ledge  Date V 5/23/200  Complete of sectionly spaces  Lapanese section section of spaces of section sectio	G As of Art 1 in the Carlo Man Carlo

CERTIFICATE OF REGISTRATION
Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Padel For Supplementary Registration Padel Fo





issued under the seal of the Copyright Office in ac. Jance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.



TX/ TXU PA PAU VA VAU SR SAU RE EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 2 4 2000

DEFICIATERY PRICE ABOVE INIO LINE IF YOU NERE GIRLES ACCORDERED ARATE CONTINUATION SHEET, Title of Work ▼ BUILD\_TOOLS/TARGETS.MK (V.1.1) Registration Number of the Basic Registration V Year of Basic Registration ♥ TXu 909-299 2000 Name(s) of Author(s) V Name(s) of Copyright Claimant(s) ▼ Alcatel USA, Inc. Alcatel USA, Inc. Location and Nature of Incorrect Information in Basic Registration ▼ Line Number 2a: 4: 4 Line Heading or Description Name of author; Copyright claimant; Transfe Incorrect Information as It Appears in Basic Registration ♥ Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claiment) Corrected Information ▼ Alcatel Metwork Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer) Explanation of Correction V To reflect the correct Alcatel entities as author and claimant as of the time the application was filed. Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number Line Heading or Description

*****	
Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Fage 4:00 PageID #:	77
FUNDS RECEIVED TE	
<u>MAY 2 4 2000</u>	
EXAMINED BY	
	FOR COPYRIGHT
CORRESPONDENCE O	OFFICE
REFERENCE TO THIS REGISTRATION ADOED TO	ONLY
BASIC REGISTRATION YES IND	
DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.	
Continuation of: O Part B or O Part C	و ودنور بندان
	1 3
•	ون.
,	•
Correspondence: Cive name and address to which correspondence about this application should be sent.	
A. PEALGROO SOASTY, ESG.	
Alcatel USA, Inc.	
1000 Coit Road Plano, TX 75075	
Phone (	
972 - 519-3735	
Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account	ount.
Name	
Account Number	
Certification* I, the undersigned, hereby certify that I am that (Check only one)	- <del> </del>
Sourcing, L.P. by Alcatel USA Sourci	
Name of author or other copyright claimant, or owner of exclusive right(s) d	<b>_</b> •
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge	<u>).</u>
Typed or printed name ♥  V. Lawrence Sawell  Date ♥ 5/23/200	61
Handwritten signature (X) ▼	
VI au Den = 01	7

Certificate will be mailed in window envelope to this

address:

Name V V. Lawrence Sewell Alcatel USA, Inc. 1000 Coit Road

Cay/State/20P ▼

Plano, TX 75075

February 2000-10,000 WEB REV: June 1880

---

OUA GOVERNMENT PRINTING OFFICE: 2000-461-113/107

case 4:1 CERTIFICATE OF REGI Case 4:00-cv-00199 ON Document 1 Filed 06/01/00 This Certifie issued under the seal of the Copyright Office in ac. ance with title 17. United States Code. attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records. PAU VA VAU SA SAU RE THE LIBRARY OF CO ECTIVE DATE OF SUPPLEMENTARY REGISTRATION MAY 2 4 2000 CHOTER OF COPYRIGHT ATE CONTINUATION SHEET. United States of America Title of Work V BUILD\_TOOLS/WHIP.PL (V.1.3) Registration Number of the Basic Registration **V** Year of Basic Registration V TXu 909-300 Name(s) of Author(s) ▼ Name(s) of Copyright Claimant(s) ▼ Alcatel USA, Inc. Alcatel USA, Inc. Location and Nature of Incorrect Information in Basic Registration V Line Heading or Description Name of author: Copyright claimant: Transfe Incorrect Information as I: Appears in Basic Registration ▼ Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claiment); By transfer (Transfer)

Explanation of Correction ♥

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified 

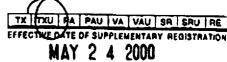
Line Number \_\_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Case 4:00-cv-00199-PNB Document	1 Filed 06/M10002 Flag20009 of 100 PageID	#: 79
<del></del> -	FUNDS RECEIVED	
	EXAMINED BY	
	COARESPONDENCE Q	FOR COPYRIGHT OFFICE
	REFERENCE TO THIS REGISTRATION ADDED TO	USE
	BABIC REGISTRATION YES DINO	
IOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, U	ISE A SEPARATE CONTINUATION SHEET.	رووي رسو معادلات
		17
•		المنا
	•	
	result established in the Copyright Office, give name and number of Ac	count.
nt Number		<del></del>
lostion* i, the undersigned, hereby cartify that i am the: (Check or author owner of exclusive right)  John copyright claimant duly authorized agent of	Alcatel USA Sourcing, L.P. by Alcatel GP, Inc., General Partner	
	Name of author or other copyright claimant, or owner of exclusive right(s ments made by me in this application are correct to the best of my knowled	
er printed name V. Lawrence Sever11	DMe ▼ 5/23/24	0 0/
written signature (X) V	Sewell	U
Carlo Norme V V. Lawrence Sevell	· Cinple the result from	
Alcatel USA, Iuc.	· Campless als necessary species • Eigh your application in Egoto F	ı U
1000 Coit Road	1. Application forth 8. Honority adopting top its object or money wider payable to Program of Copyrights	As of July 1. 1995, the les
M: Chylamide ▼ Plane, TX 75075	Last a Congress	CA is the
F1200, 14 /30/3	in the same and a same and a same and a same	
C. § 206(e): Any person who knowingly makes a false representation of a majorial last I application, shall be fined not more than \$2,500.	In the application for copyright registration provided for by beginn 400, or in any written system.	rt lied in connection
7 2500—40,000 @ FEBRE DE MICRUS MAPE N. June 1888	eu.s. governasint printing offic	CE: 2000-461-113/107

CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Pace 80 of the Copyright Office in dance with title 17. United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.





Title of Work

Title of Work ▼

BUILD\_TOOLS/RULES.MK (V.1.1)

Registration Number of the Basic Registration ▼

TXu 909-301

Name(s) of Author(s) ▼

Alcatel USA, Inc.

Year of Basic Registration ▼

2000

Name(s) of Copyright Claimant(s) ▼

Alcatel USA, Inc.

3

Location and Nature of Incorrect Information in Besic Registration V

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfer

United States of America

Incorrect Information as It Appears in Basic Registration V

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

Corrected Information ¥

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claiment as of the time the application was filed.

-

Location and Nature of Information in Basic Registration to be Amplified V

Line Number \_\_\_\_\_ Line Heading or Description

Case 4:00-cv-00199-PNB Document 1 Filed (144) 1/804 F200 81 of 100 PageID #: 81 MAY 2 4 2000 EXAMINED BY FOR COPYRIGHT CORRESPONDENCE OFFICE USE ONLY REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION Y YES ONC DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET. Continuation of: Q Part B or Q Part C Correspondence: Give name and address to which correspondence about this application should be sent. V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road Plano, TX 75075 Fax (972 ) 477-9328 Email 972 - 51<del>9-</del>3735 Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. Name . Account Number Certification\* I, the undersigned, hereby certify that I am the: (Check only one) Alcatel USA Sourcing, L.P. by Alcatel USA writer of exclusive right(s) Dother copyright claimant duly authorized agent of GP, Inc., Length = Entered | Entered | Entered | Name of author or other copyright claimant, or owner of exclusive right(s) | of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge. Date V Typed or printed name ♥ Lawrence Sewell Handwritten signature (X) Nume V V. LAWRENCE SEVELL Certificate will be melled in Alcatel USA, Inc. window envelope 1000 Colt Road to this

\*17 U.S.C. \$ SOS(a): Any passes who investigly makes a later representation of a makes in the application for depyright registration provided for by section 400, or in any united expension about in connection with the application, shall be fined not more than \$2.500.

February 2000-44,080 WEB REV: June 1999

address:

Caty/Blate/ZIP ▼

Questo to attache and

Plano, TX 75075

BU.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/107

# CERTIFICATEO OF- TEGISTRATION ment 1 Filed 06/01/00 Paulites STATES FOR SUPPLEMENTATION PAULITES STATES FOR SUPPLEMENT OF SUPPLE



Title of Work ▼

TXu 909-302

sued under the seal of the Copyright This Certifica Office in acc. unce with title 17, United States Code. attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

A PAU VA VAU SR SRU RE

WE DATE OF SUPPLEMENTARY REGISTRATION MAY 2 4 2000 VEHICHTBATE CONTINUATION SHEET. United States of America BUILD TOOLS/WHIPSOURCE.PL (V.1.1) Year of Basic Registration ♥ Registration Number of the Basic Registration ▼ 2000 Name(s) of Copyright Claimant(s) ▼ Name(s) of Author(s) ♥ Alcatel USA, Inc. Alcatel USA, Inc. Location and Nature of Incorrect Information in Basic Registration V Line Heading or Description Name of author: Copyright claimant; Transfe Line Number 24: 4: 4 Incorrect Information as It Appears in Basic Registration ▼ Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant) Corrected Information ▼ Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer) Explanation of Correction ▼ To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified V

Line Heading or Description Line Number

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/202 Ragging 3 of 100 PageID #: 83

FUNDS RECEIVED DAY

MAY 2 4 2000

EXAMINED BY

CORRESPONDENZE D

REFERENCE TO THIS REGISTRATION TO YES DINO

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: D Part B or D Part C

Correspondence: Cive name and address to which correspondence about this application should be sent.

Deposit Acc	72 = 519-3735  munit: If the registration fee is to be charged to a Deposit Account established	
Account Nu	mber	
Certification	Dother copyright claiment  duly sutherized agent of	1 USA Sourcing, L.P. by Alcatel USA  c. General Partner  other copyright claimant, or owner of exclusive right(s) A in this application are correct to the best of my knowledge.
Typed or pr	Inted name ▼ V. Lawrance Sewell	Date \$ 5/2.3/2000
Handwritter	n signature 00 ♥	
Certificate will be mailed in	Nome V V. Lavrence Sevell Alcatel USA, Inc.	: Ele ton element element :
window envelope to this	1000 Coit Road	1. Application form  9. Incorporation integrate to sheet or makery system payable to fleephor of Company to 11000, the fin
eddresa:	Ch/Sun/ZF ♥ Plano, TX 75075	Lawy of Congress CA in 1846. Congress Chain Intelligence CA in 1846.

-

eU.S. GOVERNMENT PRINTING OFFICE; 2000-461-113/107

# STATES COPYRICAN CERTIFICATE OF TRATION ument 1 Filed 06/01/00



For Eupolementary Registration
Page 84 STOTES OF PROJECT BEFALLE 84



This Certificate \_aued under the seal of the Copyright Office in accordance with title 17, United States Code. attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

VA I VAU I SR I SRU RE EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

LIBRARY OF CO REGISTER OF CORYRIGHTSATE CONTINUATION SHEET. OFFICIAL-SEAL..... Title of Work ▼ BUILD TOOLS/WRIP.PL (V.1.1) Registration Number of the Basic Registration ▼ Year of Basic Registration W 2000 TXu 909-303 Name(s) of Copyright Claimant(s) ▼ Name(s) of Author(s) ▼ Alcatel USA, Inc. Alcatel USA, Inc. Location and Nature of Incorrect Information in Basic Registration ▼ Line Heading or Description Name of author: Copyright claimant: Transfe Line Number 28: 4: 4 Incorrect Information as It Appears in Basic Registration ♥ Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant) Corrected Information ▼ Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer) Explanation of Correction ▼ To reflect the correct Alcatel cutities as author and claimant as of the time the application was filed. Location and Nature of Information in Basic Registration to be Amplified V Line Heading or Description Line Number

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: Q Part B or Q Part C

	:	
•	ence: Give name and address to which correspondence about this application should be set V. Lawrence Sewell, Esq. Alcatel USA, Inc. 1000 Coit Road. Plano, TX 75075  Pax (972) 477-9328  Email	
97 Deposit Acc Name	Pax (972) 477-9328 Emi 72 - 519-3735  COUNT: If the registration fee is to be charged to a Deposit Account established in the Copyri	ght Office, give name and number of Account.
Account Nu	mber	
Certification	This has an arright claims at Enduly subported agent of GP a Inc Gent	ht claimant, or owner of exclusive right(s) A. tion are correct to the best of my knowledge.
Typed or pr	inted name V. Lawrence Sevell	Date 5/23/2000
Handwritte	n signature (X) ▼ ( r sensel (	€
Handwritter Certificate witt be mailed in window envelope	Name V V. Lawrence Sewell Alcatel USA, Inc. NumberGreeNAst V 1000 Coit Road	- Compress all indicatory operats - Bigs your application in Speed F  I. Appreciation form  B. Monte fundable living the in check or Assay order payable to Repairs of  As all July

will government printing office: 2000-461-119/107

### CERTIFICATEOOF REGISTRATION ument 1 Filed 06/01/00



This Certificate usuad under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.



TXVITXU PA PAU VA VAU SR SRU RE

	OF CONCERN	FEFECTIVE DATE OF SUPPLEMENTARY REGISTRATION MAY 2 4 2000
RARY	OF CON	F-CORYRIGHTSATE CONTINUATION SHEET.
خوراندا دار	Title of Work V APU/AXM/MAXEFILE (V.1.9)	nales ur America
	Registration Number of the Basic Registration ▼	Year of Besic Registration ♥
	Tžu 909-304	2000
	Name(s) of Author(s) ▼	Name(s) of Copyright Claimant(s) ▼
	Alcatel USA, Inc.	Alcatel USA, Inc.
	Location and Nature of Incorrect Information in Basic Registration Line Number 2a; 4; 4 Line Heading or Description Line Heading Line Heading or Description Line Heading or Description Line Heading or Description Line Heading or Description Line Heading Line Heading or Description Line Heading or Description Line Heading Lin	riptionName of author; Copyright claimant; Transfer
	Corrected Information ▼ Alcatel Network Systems, Inc. (Author); transfer (Transfer)	Alcatel USA Sourcing, L.P. (Claiment); By
	Explanation of Correction V  To reflect the correct Alcatel entities application was filed.	as author and claimant as of the time the
	Location and Nature of Information in Basic Registration to be	Amplified ♥
7.	Line Meeding on Deep	edation

					-	ייי אין אייי
Cas	se 4:00-cv-00199-PNB	Document 1	Filed 06	<b>4</b> -2 <b>000</b> 87 of	100 PageID #:	87
		•-	FUNDS RE	CEIVED DAT		
			MAT	2 4 2062		
			EXAMINEO	18Y Q		FOR
			CORRESP	ONDENCED		OPYRIGHT OFFICE
			BESSOEM	CE TO THIS REGISTI	A TON ADDED TO	USE ONLY
					YES DINO	
O NOT WE!	TE ABOVE THIS LINE. IF YOU NEE	D MORE SPACE, USE	A SEPARATE CONTINU	JATION BHEET.		
Continuation	of: OPart B or OPart C					
						1)
•						
				•		
		:				
Corresponde	rce: Give name and address to which V. Lawrence Sewell, Alcatel USA, Inc.	Esq.	the application of the second			
	1000 Coit Road Plano, TX 75075					
Phone (		Fax (972 ) 477-	9328	Email		<del></del>
97) Deposit Aco	2 - 519-3735 ounc: If the registration fee is to be ch	arged to a Deposit Acc	ount established in the Ci	opyright Office, give n	ame and number of Acco	unt.
Name						_
Account Nut						
Certification	I. the undersigned, hereby certify the suthor	has I am the: (Check onl ner of exclusive right(s)	VICTOR AT	Sourcing, L.	P. by Alcatel U	ISA 📜
	Dother copyright claimant Bdul	y authorized agent of _	GP, INC., G	eneral Partne	uner of exclusive right(s) 4	
	of the work identified in this applica	tion and that the statem	ents made by me in this ag	plication are correct to	the pest of my knowledge	<u>.                                    </u>
Typed or pri	inted name V. Lawrence	Sevell		Data	5/23/200	0
Handwritter	n signature (X) ▼		01			O
	16	3/5	me Cf			
Certificate	Name V V. LAWTERCE Sevi	•11		- Eomp	ing the vectorest in Shote &	G
will be mailed in	Alcatel USA, Inc	<b>.</b>				U
window envelope	1000 Coit Road			1. Appl 2. New 	parise term plyindsblo ming top in chack or py areas parishe to Arabitas of parish	As of July 1.
to this	Cay/Semo/21P ▼					1990, the fee for filling form CA to 840.
	Plano, TX 7507	5		Carried 1911 In	of Compress to China approximate Arraford, & E. gare, D. C. Steppe-comm	
	B(e); Any period who knowingly makes a lake my	ensembles of a material leaf	p gan addigation on anticipa sed		on 400, or in any smaller manager	e Hed in surnethin
mile to approach	sen, shed be inted not make them success.				CVERNMENT PRINTING OFFICE	
Frankry 2000- WEB REV: JUN	-40,000 @mange on necrusi	) PO\$0	•			

#### CERTIFICATE OF THE SISTEMENT 1 Filed 06/01/00





This Certifica , issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

(Xu\_909 - 345

PA PAU VA VAU SA SAU RE EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 2 4 2000

DOPYRIGHTEATE CONTINUATION SHEET.

Title of Work ▼

BUILD TOOLS/TARGETS.MK (V.1.22)

Registration Number of the Basic Registration V Year of Basic Registration ▼ TXu 909-305 2000 Name(s) of Author(s) ▼ Name(s) of Copyright Claimant(s) ▼ Alcatel USA, Inc. Alcatel USA, Inc.

United States of America



Location and Nature of Incorrect Information in Basic Registration \

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfe

Incorrect Information as It Appears in Basic Registration W

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claiment)

Corrected Information V

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claiment); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claiment as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified V

Line Heading or Description

lence: Give name and address to which correspondence about this application should	i be senc.	
Alcatel USA, Inc. 1000 Coit Road		<u>1</u>
	Email	<del></del>
count: If the registration fee is to be charged to a Deposit Account established in the	Copyright Office, give name and number of Acco	unt.
umber		
author   owner of exclusive right(s)   CF2   IRC     Dither copyright claimant   duly authorized sgent of   Name of author or other	Coneral Pertner  copyright claiment, or owner of exclusive right(s)	<del>-</del> 1
rinted name V. Lawrence Sevell	Date ¥ 5/23/204	7.0
en signature (X) ▼		Q
Name V V. Lawrence Sewell Alcatel USA, Inc.	· Gemplit of nocobby spenso · Sign your opposednes of Spens F	G
Number@restApt V 1000 Coit Road	1. Applicated term 2. Reproducted thing he to excel or money original applicate of Copyrights	As of July 1. 1988, the les
Con/State/DP ♥	Largy of Congress	CA to Mis.
	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972 ) 477-9328  72 - 519-3735  count: If the registration fee is to be charged to a Deposit Account established in the simber  In I, the undersigned, hereby certify that I am that (Check only one)  Plauthor  Plauthor  Plauthor  Plauthor  Plauthor Copyright claimant  Alcatel USA  Name of author or either of the work identified in this application and that the statements made by me in this rinted name   V. Lawrence Sevell  Alcatel USA, Inc.	Alcatel USA, Inc.  1000 Coit Road  Plano, TX 75075  Fax (972) 477-9328  Email  72 - 519-3735  count: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account: If the undersigned, hereby certify that I am tha: (Check only one)    Description of the undersigned, hereby certify that I am tha: (Check only one)   Description of Lagrange of Exclusive right(s)

Business see seculate seems

OU.B. DOVERNMENT PRINTING OFFICE: 2000-461-113/107

## CERTIFICATEON - REGISTIFIATION ument 1 Filed 06/01/00

A CARATA CAR	
Panes State Of Project Of The State of the S	
rage 99 01 100 rage 10 #. 90	_
ŘEGIE	



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code. attests that registration has been made for the work identiTXu 909 - 346

THE LIBRA	fied below. The information on this center of the Copyright Office recommendation of the Copyrig	ords. Peters	TX (TXU) PA   PAU   VA   VAU   SR   SRU   RE   EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION MAY 2 4 2000  Manch Cay Year E CONTINUATION SHEET.		
A.	Title of Work V BUILD_TOOLS/MAKEFILE (V.1.26)	States of America			
E - 57	Registration Number of the Basic Registration ▼ TXu 909-306	Year of Basic Registration ♥ 2000			
•	Name(s) of Author(s) ▼		of Copyright Claimant(s) ▼		
	Alcatel USA, Inc.	Alcate	el USA, Inc.		
			uthor; Copyright claimant; Transf		
RUNG	Incorrect Information as it Appears in Basic Registration ♥  Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)				
	Corrected Information V Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claiment); By transfer (Transfer)				
	Explanation of Correction V  To reflect the correct Alcatel entities application was filed.	es as author as	nd claiment as of the time the		
	Location and Nature of Information in Basic Registration to be	e Amplified ▼			
E V	Line Heading or De	scription			

Fig.

Cas	se 4:00-cv-00199-PNB Document 1	FORM CA RECEIVED		FORM CA
Jak	,	FUNDS RECEIVED DAT		<b>0</b> -
		MAY 2 4 20	W	
		EXAMINED BY		FOR OPYRIGHT
		CORRESPONDENCE		OFFICE USE ONLY
		REFERENCE TO THIS P BASIC REGISTRATION	EGISTRATION ADDED TO	ONLY
O NOT WRI	TE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE	A SEPARATE CONTINUATION SHEE	т.	
Continuation	of: QPart B or QPart C			13
·				
		•		
	·			
	:			
Commonada	nce: Cive name and address to which correspondence about	this application should be sent.		
Corresponde	V. Lawrence Sewell, Esq. Alcatel USA. Inc.			
	1000 Coit Road			<i>V</i>
Phone (	Plano, TX 75075	-9328 Email		<del></del> -
074	2 - 519-3735  nunt: If the registration fee is to be charged to a Deposit Acc	<del></del>	give name and number of Acco	unt.
Name				_
Account Nun				
Certification	I. the undersigned, hereby certify that I am that (Check on author    author		rtber	16
	of the work identified in this application and that the statem	ents made by me in this application are to	reect to the best of my knowledge	<b>-</b>
Typed or pri	med name V. Lawrence Sevell		Date \$ 5/23/20	<u>0</u> 0
Handwritten	▼ (X) outlangle	i nell		D
Certificate	Name V V. Lawrence Sevell		· Complete of recreatory apaces	
will be mailed in	Alcatel USA, Inc.		- Siya yewi depetellek di Spece F	J
window envelope to this	1000 Coit Road		1, appropriate form  E. translated the fine in these of  actor order percha in Approx of  Copyrights	As of July 1, 1990, the fee for Hing Form
eddress:	Plano, TX 75075		Copyright Colors  (6) Indiana America, 9 &	CA IN SAL

\*17 U.S.C. § SOR(e): Any person wire impurity makes a false representation of a majoral feet in the application for emyright regionalism provided for by business 608, or in any unitary apparated fixed in connections with the application, shall be fixed not more than 62.500.

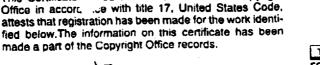
February 2000—40.000 WEB REV: June 1999

---

+U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/107

Case 4:0
Case 4:0 CERTIFICATE OF REGISTHATION ed under the seal of the Copyright This Certificate Office in accord the with title 17, United States Code.

UNITED STATES COPTRIGHT OFFICE Prager 9200 h Page ID #: 92



MENTARY REGISTRATION

MAY 2 4 2000

ISTER-OF CORVENIENT GATE CONTINUATION SHEET.

CIBRARY OF CO

	and the second of the second o
Tale of Woods =	United States of America
'lile of Work ▼	
RUILD TOOLS/DEFINES.MK (V.1.35)	

Year of Basic Registration ▼ Registration Number of the Basic Registration ¥ 2000 TXu 909-307 Name(s) of Copyright Claimant(s) ▼ Name(s) of Author(s) ♥ Alcatel USA, Inc. Alcatel USA, Inc.

Location and Nature of Incorrect Information in Basic Registration ▼

Line Heading or Description Name of author; Copyright claimant; Transfer Line Number 2a; 4; 4

Incorrect Information as It Appears in Basic Registration ▼

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

made a part of the Copyright Office records.

Corrected Information ▼ Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.



Location and Nature of Information in Basic Registration to be Amplified ▼

Line Heading or Description Line Number

Ca	ase 4:00-cv-00199-PNB	Document 1			#: 93
			FUNDS RECEIVE	•	
			MAY 2 4	2000	
			EXAMINED BY	A	FÖR COPYRIGHT
			CORRESPONDEN	ICED	OFFICE
			REFERENCE TO	THIS REGISTRATION ADDED TO	ONLY
			BASIC REGISTRA		
DO NOT W	RITE ABOVE THIS LINE. IF YOU NEE	D MORE SPACE, USE	A SEPARATE CONTINUATION	SHEET.	
Continuation	on of: Q Part B or Q Part C			A STATE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO PERSON NAMED IN C	-
					1)
•					<i></i>
				•	
		:			
Correspond	lence: Cive name and address to which V. Lawrence Sevell, Alcatel USA, Inc.	correspondence about t <b>Eaq.</b>	his application should be sent.		Ε
	1000 Coit Road Plano, TX 75075				
Phone (		Fax ( <u>972.) 477-9</u>	328 Email _		<u></u>
97 Deposit Acc	72 - 519-3735 count: If the registration fee is to be cha	rged to a Deposit Accou	int established in the Copyright	Office, give name and number of Ac	count.
Name					
Account Nu			<del></del>		
Certification	n° I, the undersigned, hereby certify the  author	n at exclusive tight(s) it i ew the: (Check only:	Alcatel USA Sour		USA 🔼
	Dother copyright claimant  duly	authorized agent of	GP. Inc., Genera	l Parther  laimant, or owner of exclusive right(s)	
	of the work identified in this splication	on and that the stutemen	ts,made by me in this application		ge.
Typed or pr	inted name V. Lawrence Se	weli		Date \$ 5/23/20x	<u>0</u>
Handwritte	n signature (X) ▼		well	<del></del>	<del>O</del>
Cartificate wiil be mailed in	Alcatel USA, Inc.			- Campinis al nocycles apecos - Bigo year epphasition in Space /	i (j
window	Number@nevAst ♥			1. Appropriate form 1. Beenfundable filing the m thesis or money order payable to Regular of	
envelope to this	1000 Coit Road			noney order payable to Aspeller of Gaprapase	As of July 1, 1909, the los for filing form CA to SAA.
eddr <del>oss</del> :	Place, TX 75075			Large of Company Cooping Office 151 Industrial Arrange, 5.5	CA II MA
				Washington, S.C. Mildhealth	
17 U.S.C. § 500 with the applicat	I(e): Any person who krawingly makes a laise reprinter, shall be fined not more then \$2,800.	normation of a motorful facility by	a application for outlyinghe registration prov	dard for by section 400, or in any within statement	re fied in connection
Fabruary 2000-		_		±U.B. GOVERNMENT PRINTING OFFIC	Æ: 2000-441-113/107

rum La

## CERTIFICATED OF PEGISTRATION Document 1 Filed 06/01/00

STATES COPYRICHA

ed under the seal of the Copyright This Certificate Office in accordance with title 17, United States Code. attests that registration has been made for the work identified below. The information on this certificate has been

Page 94 of 100 PageID #: 94			
909 - 348 <b>A LIZENTAL</b>			

UNITED STATES COPYRIGHT OFFICE

made a part of the Copyright Office records. PA PAU VA VAU SR SRU RE EFFEORING DATE OF BUPPLEMENTARY REGISTRATION THE LIBRARY OF CO **2000** ER OF CORVEIGHT SATE CONTINUATION BHEET. United States of America Title of Work ▼ BUILD TOOLS/RULES.MK (V.1.12) Year of Basic Registration ▼ Registration Number of the Basic Registration ▼ 2000 TXu 909-308 Name(s) of Copyright Claimant(s) ▼ Name(s) of Author(s) ♥ Alcatel USA, Inc. Alcatel USA, Inc. Location and Nature of Incorrect Information in Basic Registration ▼ Line Heading or Description Name of author; Copyright claimant; Transfer Line Number 2a; 4; 4 Incorrect Information as It Appears in Basic Registration ¥ Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant) Corrected Information ♥ Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claiment); By transfer (Transfer) Explanation of Correction V To reflect the correct Alcatel entities as author and claimant as of the time the application was filed. Location and Nature of Information in Basic Registration to be Amplified ▼

Line Heading or Description Line Number

	Case 4:00-cv-00199-PNB	Document 1			D #: 95
			FUNDS RECE MAY 2	4 2000	
			EXAMINED BY		
				AC	FOR COPYRIGHT
			CORRESPON	DENCED	OFFICE USE
			REFERÊNCE BASIC REGIS	TO THIS REGISTRATION ADDED TO	ONLY
no mot wi	DITT ABAUT TUIS I MIR IS VAILNESS I	1005 60 to 1146 t			
	RITE ABOVE THIS LINE. IF YOU NEED I	NOME SPACE, USE A	BEPARATE CONTINUAT	ION SHEET.	·
					1,3
					المحددا
				•	
		:			
Correspond	ence: Give name and address to which co V. Lawrence Sewell, E	rrespondence about thi	a application should be se	M.	
	Alcatel USA, Inc.				
	1000 Coit Road Plano, TK 75075				
Phone (		(972) 477 <del>-93</del>	28 Em	ui	
97	72 - 519-3735  sount: If the registration fee is to be charge			oht Office, give name and number of A	eccount.
Name	Marie It the Leftressmontant of the to be commit-	ad to a Departe Account	подражения соруг	Ant Guine, But well and transcript	
Account Nu	mber				
	n" I, the undersigned, hereby certify that I	ern the: (Check only or	ne)		
	□author □ 0wner	of exclusive right(a)	GP. Inc., Gene	urcing, L.P. by Alcatel	USA
	Dother copyright claimant  duly au	Nam	e of author or other copyrig	ht claimant, or owner of exclusive right	3) 🛕
	of the work identified in this application	and that the statements	made by me in this applica	D	
Typed or po	rinted name V. Lawrence Sev	nll =		3/23/20	200
Handwritte	n algriature (X) ♥		0/		7
	1 hor	- Ser	vel		
Certificate	Name V V. Lawrence Sevell			· Complete all mocessisty spices • Sign your apparatum m Spoot f	
will be malled in	Alcatel USA, Inc.				· u
window	Nymenthrowen V			1. Applicable land 2. Hombi nebble lang too in check or money order papable to Repairs of Copyrights	4
envelope to this	1000 Coit Road			Collabora with both billing a subana	As of July 1, 1890, the fee for Aling Forth CA is 846.
addr <del>ess</del> :	Plano, TX 75075			Lawy of Companies Contract Office 101 Information Assetut, & E.	CA 16 166.
17 U.S.C. 6 10	E(e): Any person who braversyly means a take represen	station at a material had in the	opplication for supprigital registratio	sprovided for by equation 400, or in any written state	mare films in connection
-u to them	BOLF DATA DE SAND LES MANDE SERVI OFFINY			<b>#U.S. GOVERNMENT PRINTING OF</b>	
February 2005	D. 1980				

FURMICA

CERTI	FICALE OF HEGISTRATION		U*"TED STATES COPYRIGHT OFFICE		
OF THE LAW OF	Case 4:00-cv-00199-PNB Document 1 Filed  This Certificate ad under the seal of office in accordance with title 17, United attests that registration has been made for the field below. The information on this certific made a part of the Copyright Office records  Title of Work V  BUILD TOOLS/WHIPSOURCE, PL (V.1.3)	Peters	TX TXU PA PAU VA VAU SA SRU TRE EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION MAY 2 4 2000  MONTH Day YOU'E CONTINUATION SHEET.		
		Year of B	asic Registration ▼		
	Registration Number of the Basic Registration ▼ TXu 909-309	2000	sale well actions.		
	Name(s) of Author(s) ▼	Name(s)	of Copyright Claimant(s) ♥		
	Alcatel USA, Inc.	Alcatel USA, Inc.			
3	Location and Nature of Incorrect Information in Basic Registration V  Line Number 28; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfe				
i i i	Incorrect Information as It Appears in Basic Registration ▼				
	Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)				
	Corrected Information V Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)				
	Explanation of Correction V  To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.				
6-10- <b>10-10-10-10-10-10-10-10-10-10-10-10-10-1</b>	Location and Nature of Information in Basic Registration to be Amplified V				
( ·	Line Number Line Heading or Description				
A molified Information and Explanation of Information ▼					

UPTED STATES COPYRIGHT OFFICE

Fabruary 2000- WEB REV: June	40.000 @ margs quastered to men	OUA GUVERNMENT PRINTING	
*17 U.S.C. § 100 with the applicati	(a): Any person who transfer in makes a false representation of a material test in t on, shall be fined not more than \$2,500.	no application for copyright inquirement provided for by section 440.00 of 147 and 147	
		To independent Arthur S & Waynerston, C C. 2010 4000 The appropriate for the property of the p	and his in conscion
window envelope to this address:	Coyema/2P ▼ Plano, TX 75075	Lawy or Congress Copyright Ches	CA to 336.
	Number Brest/Apt V 1000 Coit Road	i, Application form 2. Insenting thing the or elect to menory order \$47,000 to Mappains of Corporation	As of July 1, 1999, the fee Levilling Form
Certificate will be mailed in	Alcatel USA, Inc.	· San beit 600megen je gbore i . Čeubpin en obente beete	G
	16 and	) costs	
Handwritter	signature (X) ▼		D
Typed or pri	nted name V. Lawpence Sewa D.	Date 9	000
	Na Na	ime of author or other copyright claimant, or owner of exclusive righ- nts made by me in this application are correct to the best of my knowl	
	Question Question right(s)	Alcatel USA Sourcing, L.P. by Alcate GP. Inc., General Partnet	
Certification	noer	(one)	I USA
Name			
97 Deposit Aco	2 - 519-3735	unt established in the Copyright Office, give name and number of	Account.
Phone (	Plano, TX 75075 Fax (972 ) 477~9	9328 Email	
	Alcatel USA, Inc. 1000 Coit Road		
Corresponde	ince: Give name and address to which correspondence about to V. Lawrence Sewell, Esq.	this application should be sent.	
	:		
			•
		•	
-			الون: ا
Comingeno	TOI: GPARE OF GPARC		1)
17.4	TE ABOVE THIS LINE IF YOU NEED MORE SPACE, USE	A SEPARATE CONTINUATION SHEET.	
		BASIC REGISTRATION YES DINO	•
		REFERENCE TO THIS REGISTRATION ADDED TO	USE
		EXAMINED BY	FOR COPYRIGHT OFFICE
		MAY 2 4 200u	•
		FUNDS RECEIVED DATE	•

#### CAUSE NO. 99-06912

ALCATEL USA, INC.,	§	IN THE DISTRICT COURT OF
Plaintiff,	\$ &	
<b>v</b> .	ş	DALLAS COUNTY, TEXAS
MONTEREY NETWORKS, INC.,	8	
Defendant.	§ 8	44th fUDICIAL DISTRICT COURT

# ORDER GRANTING IN PART AND DENYING IN PART PLAINTIFF'S APPLICATION FOR TEMPORARY INJUNCTION

CAME ON for hearing the application of Aleatel USA, Inc. ("Aleatel"), plaintiff, for a temporary injunction against Monterey Networks, Inc. ("Monterey"), defendant. The Court conducted an evidentiary hearing on October 19, 1999, and December 13, 14, 15, and 16, 1999. Aleatel and Monterey submitted post-hearing briefs on January 12, 1999. The Court heard argument regarding the application on February 22, 2000. Having considered the evidence, the pertinent authorities, and the arguments of counsel, the Court concludes that the application is meritorious in part and is not meritorious in part and therefore should be granted in part and denied in part.

The evidence before the Court establishes that Alcatel probably will suffer irreparable injury unless the Court issues a temporary injunction. The evidence indicates, in particular, that Marian Trnkus formerly worked as an independent contractor for Alcatel; that during the period in which he worked for Alcatel as an independent contractor Mr. Trnkus authored several generic software programs to assist him in performing work for Alcatel, including Whip, WhipSource, make/defines.mk, make/recurse.mk, make/rules.mk, and make/targets.mk; that some months after going to work for Monterey Mr. Trnkus began using derivatives of Whip (renaming it Genpat), WhipSource (renaming it Deppat), make/defines.mk, make/recurse.mk, make/rules.mk, and make/targets.mk at Monterey and persuaded others at Monterey to use them also; that these software 730176933.5086

programs are trade secrets of Alcatel; and that Alcatel will therefore probably suffer irreparable injury if Monterey does not cease using the software programs in that damages from such use may be difficult or impossible to calculate by any pecuniary standard.

The Court accordingly ORDERS as follows:

- The Clerk of the Court shall issue a Temporary Injunction enjoining Monterey, its 1. employees, its agents, its representatives, and all those who receive actual notice of the Temporary Injunction and are acting in concert with Monterey from:
  - Using the Whip, WhipSource, Genpat, or Deppat software program and any 8. other software program that is substantially similar to and derived from the Whip. WhipSource, Gennar, or Deppat software program.
  - Using the make/defines.mk, make/recurse.mk, make/rules.mk, or b. make/targets.mk software program or any other software program that is substantially similar to and derived from any of them.
- Within 14 days after the Temporary Injunction becomes effective, Monterey shall file 2. with the Court and serve on counsel for Alcatel a report disclosing the measures Monterey has taken to comply with the Temporary Injunction.
- 3. The Temporary Injunction shall not become effective unless and until Alcatel posts with the Clerk of the Court a bond in conformity with the law, or a cash deposit in lieu such a bond. in the amount of \$500,000.
  - 4. All injunctive relief not expressly granted above is hereby DENIED.

MAR 29 '00 12:35 FR PRO. JER ROSE LLP0 212 969 2900 TO 55512 692909 P.04/04

MAR-29-2000 11:24am From-LYNN,STODGHILL,McLSHEIMERATILLOTSON .-880 P.004/004 F-589

5. Trial of this case shall commence on Hallenson, 5. 2000.

SIGNED this Way of March, 2000

Malgaret Keniner, Judge the bulling

#### APPROVED AS TO FORM:

Barry C. Barnett
State Bar No. 01778700
Andrew W. Yung
State Bar No. 00794899
SUSMAN GODFREY L.L.P
901 Main Street, Suite 4100
Dallas, Texas 75202

ATTORNEYS FOR MONTEREY NETWORKS, INC.